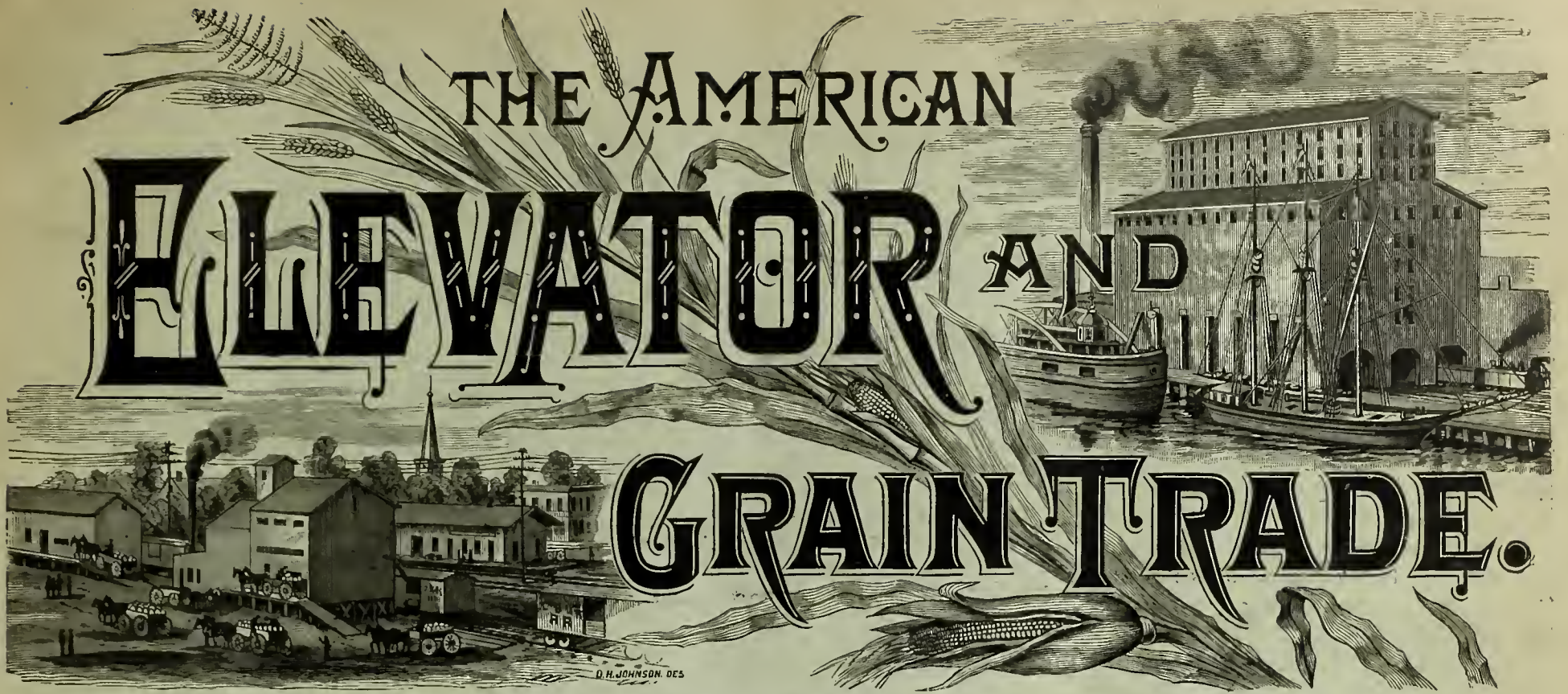


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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY  
MITCHELL BROS. COMPANY,  
(INCORPORATED.)

Vol. XVII.

CHICAGO, ILLINOIS, MARCH 15, 1899.

No. 9.

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# Excelsior Grain-Cleaning Machinery

CONSISTING OF THE

EXCELSIOR Dustless Warehouse and Elevator Separator,  
EXCELSIOR Oat Clipper, EXCELSIOR Separator and Grader,  
EXCELSIOR "Combined Grain Machine."

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PEASE DUSTLESS SEPARATORS and WAREHOUSE FANNING MILLS,  
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SHAFTING, HANGERS, PULLEYS,  
GEARS, SPROCKET WHEELS,  
"Sweep" and "Tread" Horse Powers,  
Elevator "Boots," "Heads," "Buckets,"  
FEED GRINDERS,  
Special Flax Mills; Single, Double and  
Quadruple Flax Reels.  
..... BELTING .....  
"Platform," "Hopper" and "Dump"  
Scales, Flexible Loading Spouts.  
Corn Shellers, all kinds of FITTINGS,  
SUPPLIES and MACHINERY for  
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Elevator Equipments a Specialty.

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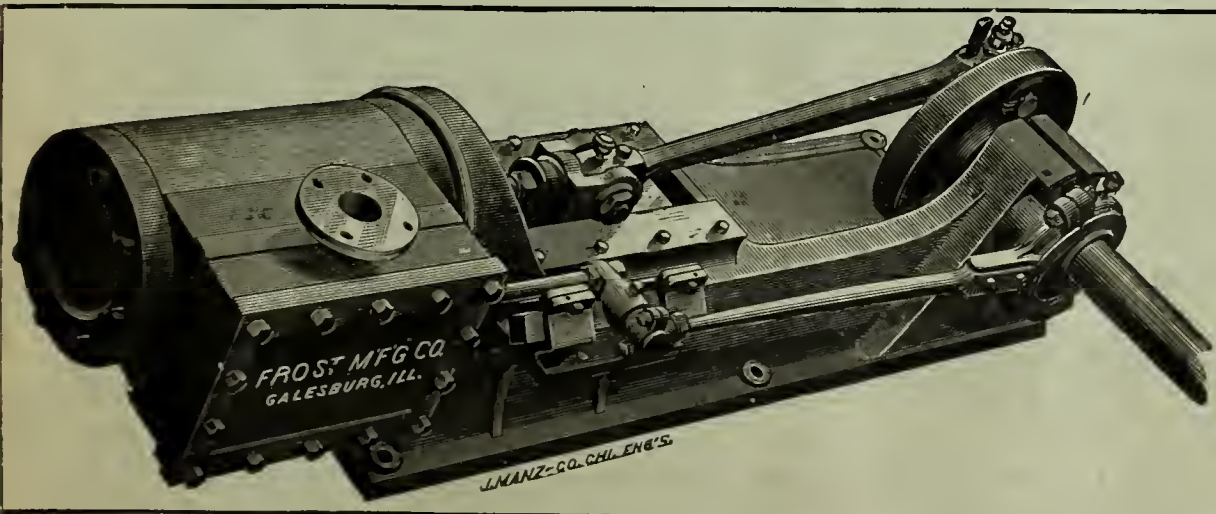
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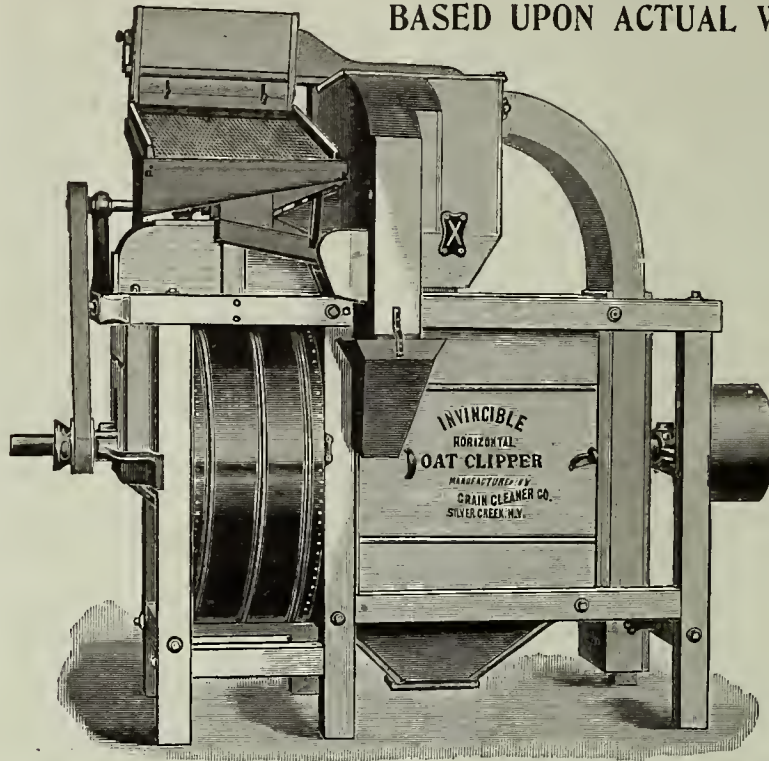
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Is known throughout all sections of the country where oats are handled. To gain this required a careful study and honest purpose. To maintain it requires good machines, made upon honor. It takes a good machine to induce a man to order the second, third and fourth. This is what many INVINCIBLE users are doing. If you have not an INVINCIBLE you are doing yourself an injustice. It saves what others waste. Send for references.



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You will find it hard work to get along without the

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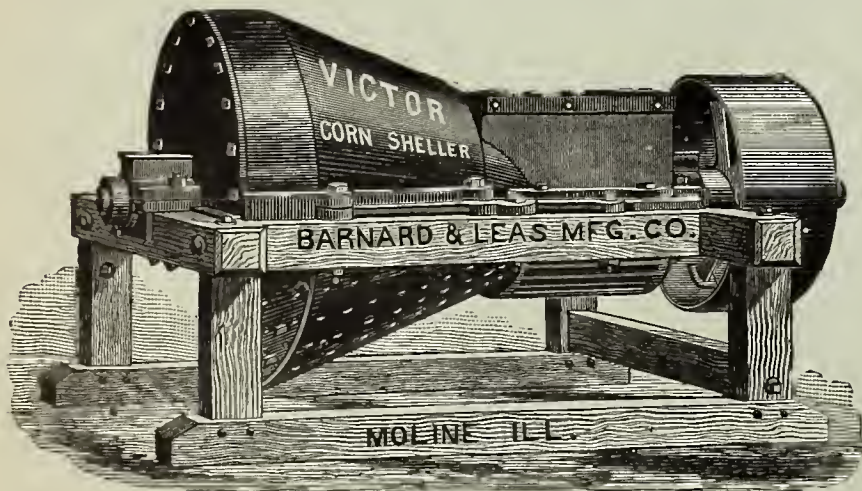
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IS THE BEST SCOURER IN USE.

Of Large Capacity. It is also the Best Oat Clipper in Use.

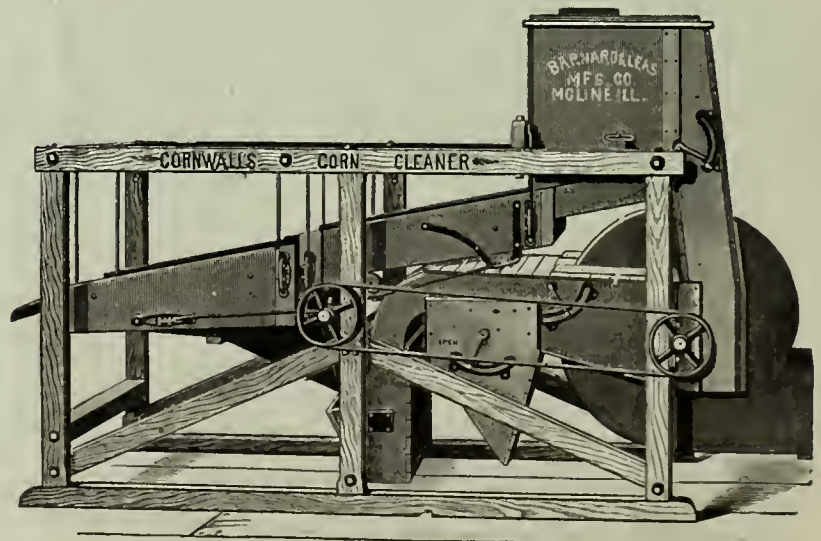
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## VICTOR SHELLER,

And the best cleaner the

## CORNWALL CORN CLEANER.

We guarantee them to clean the corn for market cleaner than any other outfit on earth.



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Find this 90-bushel size of

## Metcalf's Improved Grain Dryer

Especially adapted to their requirements.

Constructed of galvanized steel, in three sections. Can be bolted together and set up at very small cost.

Takes little floor space and can be run at a very small expense—only the cost of bringing heat to the machine and running the fan.

Capacity can be increased at any time by adding one or more sections, each section increasing it 30 bushels.

Can be used as a Cooler as well as a Dryer.

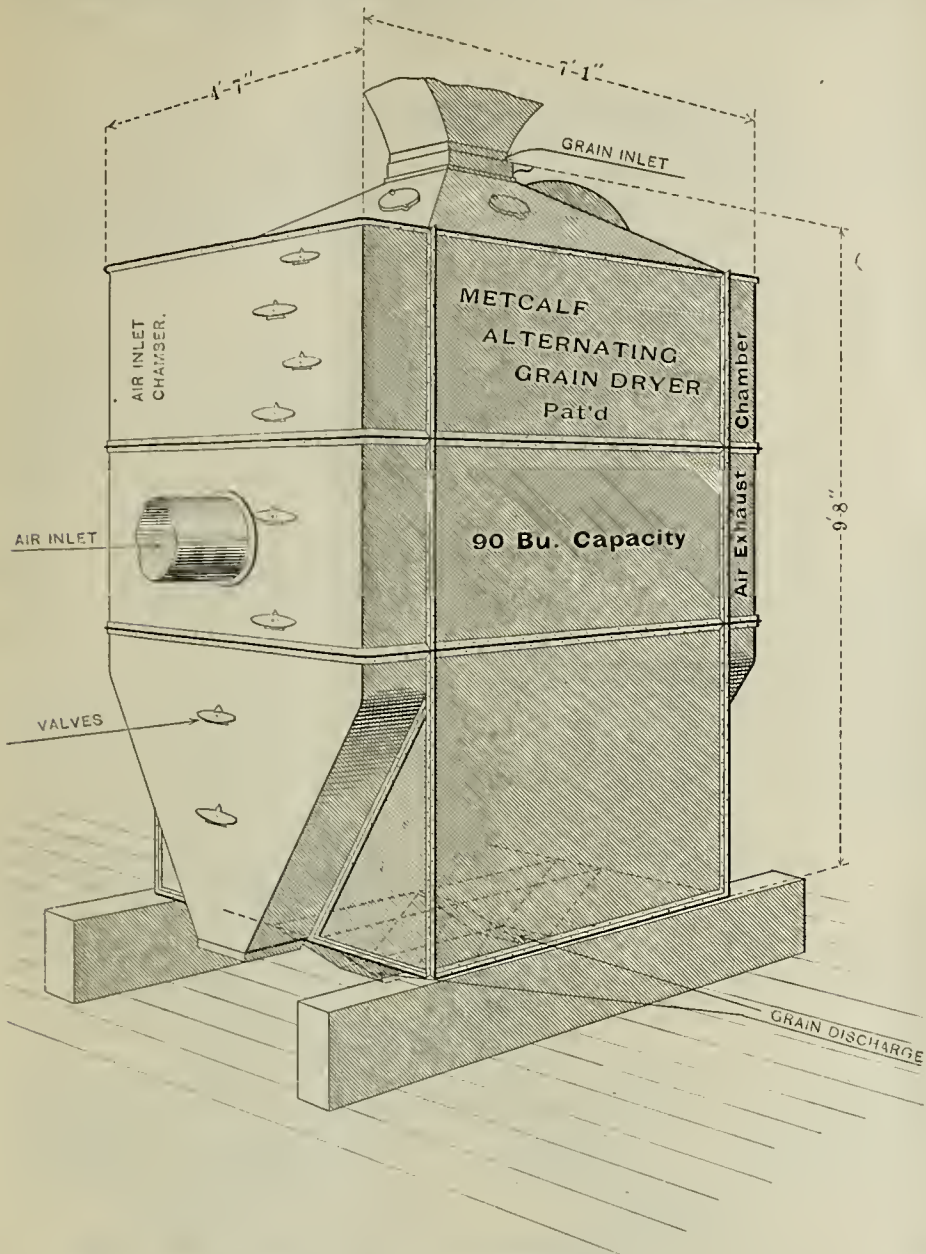
All machines are fully guaranteed.

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## THE EUREKA TWO-FAN ELEVATOR SEPARATOR.

This is a new machine, having two complete and separate fans, thus creating an even suction from four different sides.

There are no DEAD-CENTERS.

Our new counterbalance shoe drive insures smooth and steady running. THE MOST IMPORTANT FEATURE—found on no other machine.

REMEMBER that our machine has two whole fans, drawing air from four different sides, and is in no way similar to any other double fan separator that has only one fan split in two, drawing air from one side only.

THE EUREKA GRAIN CLEANERS AND OAT CLIPPERS are the standard machines of the world. Nothing but the best material and skilled labor are employed in their manufacture. The results obtained from them cannot be equaled by any other machine.

For FURTHER PARTICULARS and prices, address

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EUREKA WORKS,

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Duplicate parts of all Eureka machines built, from the time of Howes, Babcock & Co., in 1856, until the present.





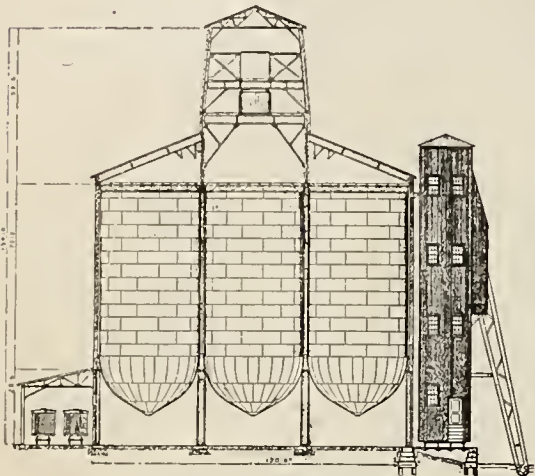
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MANUFACTURERS, ENGINEERS, CONTRACTORS.

## Grain Elevators of Steel,

ALSO

## Gas Holders with Steel Tanks.



Cross section of Great Northern Elevator furnished by us at Buffalo, N. Y. Three million bushels' capacity. Steel throughout.

Water and Oil Tanks,  
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Every Description,

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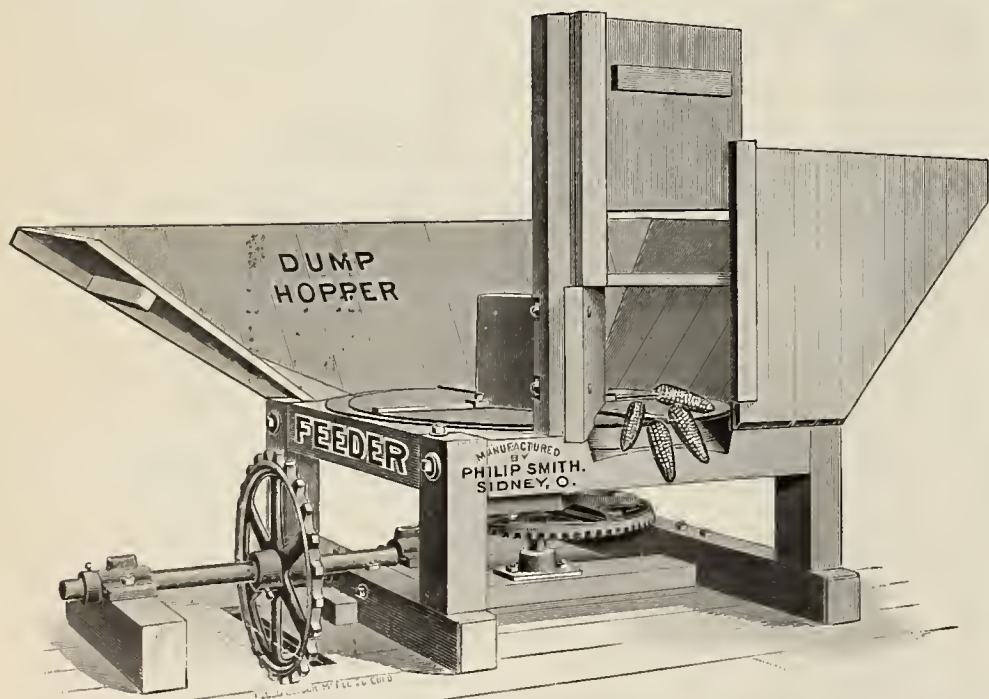
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New York Office, 39 and 41 Cortlandt Street.

LONG-DISTANCE TELEPHONE CONNECTIONS.

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### The Marquis Patent Ear Corn Elevator and Sheller Feeder

Will feed corn from the dump to elevator, or sheller, with or without aid of a drag belt. Feed adjustable from 100 from 1,500 bushels per hour. Can adjust feed to any amount sheller will handle. Feeds to either sheller or elevator by changing reverse board. An even feed is a great advantage, increasing your output, and will show a big saving in repairs on engine and transmitting machinery. Runs easier and requires less attention than any so-called feed device on the market. Is but 18 inches high, 3 feet 4 inches square, all parts being heavy and durable. Applied to old dump at very little expense. Pays for itself many times over in one season. Saves the expense of one man. Over 7,000 in use, giving universal satisfaction.

Corn Shellers, Separators, Cleaners, Ear Corn Feeder, Dumps, Self-Cleaning Head and Boot, Drags, Conveyors, Etc. Also a full line of Elevator Supplies, Belting, Pulleys, Elevator Buckets, Etc.

Parties contemplating building or repairing warehouse or elevator will do well to get my prices and description of machinery.

**PHILIP SMITH, Sidney, O.**

### BELLINGER'S PAT. LOADING SPOUT

From Elevators to Vessel, Showing Spout and Carrier complete and Connected to Building, also manner of assembling Parts of Spout when Parties change their old Spouts!

When Parties have the Iron Telescope Spouts they can Slot their old Spouts and make a Perfect Rig as shown in Details. In such cases I will furnish Every-thing Complete except Rig for handling Telescope. Cost of Right and all Parts on application.

A. D. BELLINGER,  
Supt. G. N. Elevators  
WEST SUPERIOR, WIS.

Consolidated Elevator Company.

DULUTH, MINN., Dec. 30, 1898.

A. D. Bellinger, Esq.,

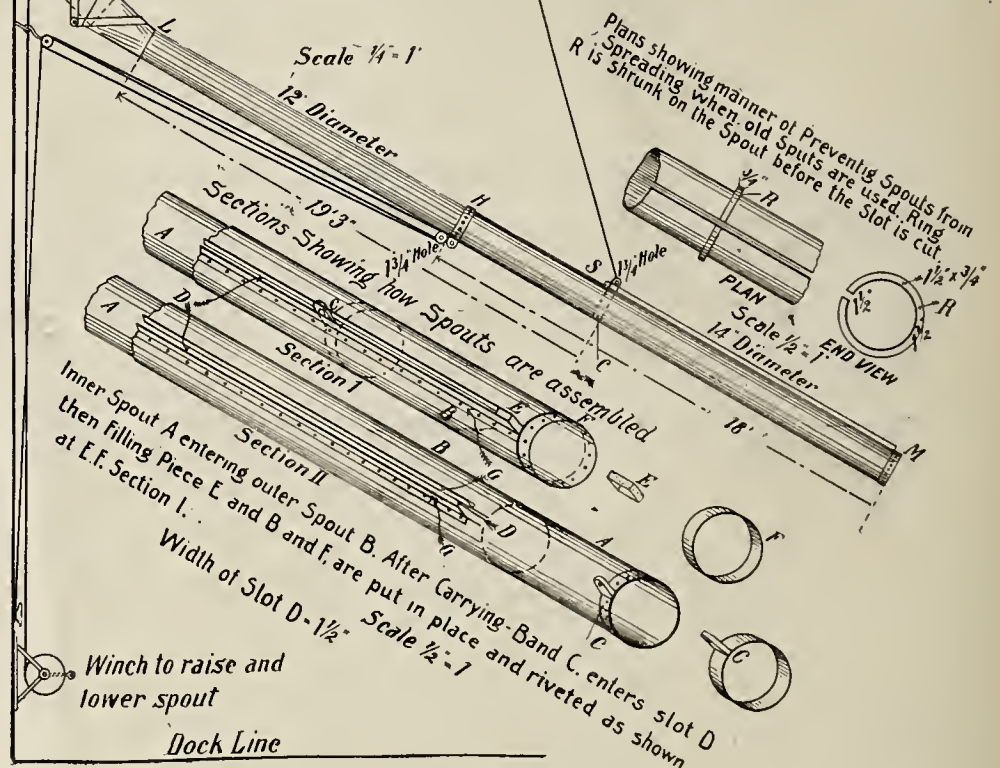
Superintendent, West Superior, Wis.

DEAR SIR:—Replying to your favor of the 29th inst., would say, we have been using 34 of your Loading-out Spouts on our elevators for some time, and are much pleased with them; we shall probably require 12 more before the next crop begins to move. We take pleasure in recommending them as the best spout we know anything about.

Yours truly,

CONSOLIDATED ELEVATOR CO.,

By M. J. Forbes, President



### Bellinger's Patent Loading Spout,

Shown in the above, is used to load grain from elevator to boat. This spout will save about one-half time in loading out, as you do not have to depend on unfit rigging furnished by the boats to handle the spouts. They are suspended from the side of the elevator by steel cables and swinging arms, in such a manner that the spouts do not have to be attached in any manner to the boat; therefore they are not liable to breakage from listing of boat; and when the boat is to be shifted from hatch to hatch, it is only necessary to swing the spout clear of the boat rigging, and before the boat is tied up the spouts can be swung over the hatch and grain started. The spouts can be lengthened or shortened at will without changing the pitch of spout. The winch used to hoist the spout can be worked by one man, and is so constructed that it is impossible to let go. This is important as the spout cannot fall and smash, which is quite common with the old-style rig.

Look the cut over and write me for any information wanted, and also for prices.

**A. D. BELLINGER,**

Superintendent Elevators,

WEST SUPERIOR, - - WISCONSIN.



# THE HESS GRAIN DRIER

Dries a carload of damp grain in thirty minutes.

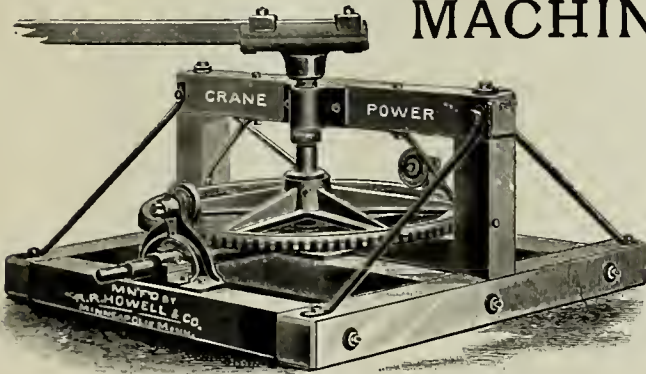
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RICHARDSON CO., Chicago,  
CONSOLIDATED ELEVATOR CO., Duluth,  
E. S. WOODWORTH CO., Minneapolis,  
CLEVELAND GRAIN CO., Cleveland, O.,

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## GRAIN ELEVATOR MACHINERY.



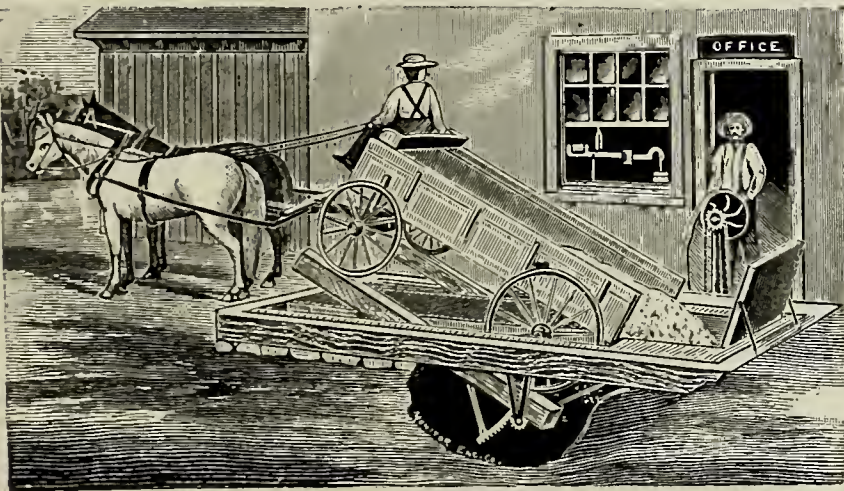
We can furnish your complete equipment on short notice.

OUR ORIGINAL CRANE POWER IS SPECIALLY ADAPTED FOR USE IN GRAIN ELEVATORS.

See advertisement of our improved corn sheller in next issue of this journal. Correspondence invited.

R. R. Howell & Co., Minneapolis, Minn.

## Gold Dollars



At FIFTY CENTS apiece are CHEAP, but they do not represent a better investment than we offer the "elevator and grain trade" in our

## Controllable Wagon Dump.

WINCHESTER, ILL., February 4, 1896.

MESSRS. SAVAGE & LOVE CO., Rockford, Ill.

GENTLEMEN:—Your favor of the 28th ult. received and noted. Last July I put one of your Controllable Wagon Dumps in a Fairbanks, Morse & Co.'s 22-ft. scale, and it has given me entire satisfaction in every respect. In this locality the bulk of grain is as yet handled in sacks, and by tipping the Dump about one-half it makes a nice slant, making it very easy to pull the sacks to back end of wagon, where strings are cut and grain runs out into bin below. Every farmer, without exception, speaks in glowing terms of the merits of this Dump. In unloading loose grain from wagon there is no dump that will equal yours in being easily handled and always under control of operator. No scaring horses, no dropping of wagon and no noise. I consider a grain elevator incomplete without the Savage & Love Controllable Wagon Dumps.

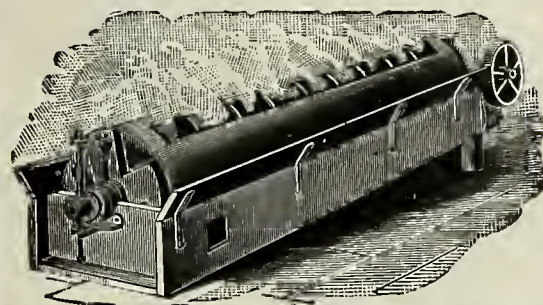
Yours truly,  
M. C. WOODWORTH.

MANUFACTURED ONLY BY

## THE SAVAGE & LOVE CO., Rockford, Ill.

FAIRBANKS, MORSE & CO., St. Paul, Minn., Northwestern Agents.

DAMP WHEAT can be PUT in CONDITION for GRINDING or STORAGE



By using our  
**STEAM DRYER,**

Which is also a successful  
Wheat Heater or Temperer  
or Dryer for Washed  
Wheat or Bran.

It leaves the Wheat in Perfect Condition for the Rolls. Will also dry  
Malster's, Brewer's and Distiller's Wet Grain.

Not an Experiment. In successful use 25 years drying

CORN MEAL AND HOMINY,

BREWERS' GRITS AND MEAL,

BUCKWHEAT, RICE AND

ALL CEREAL PRODUCTS.

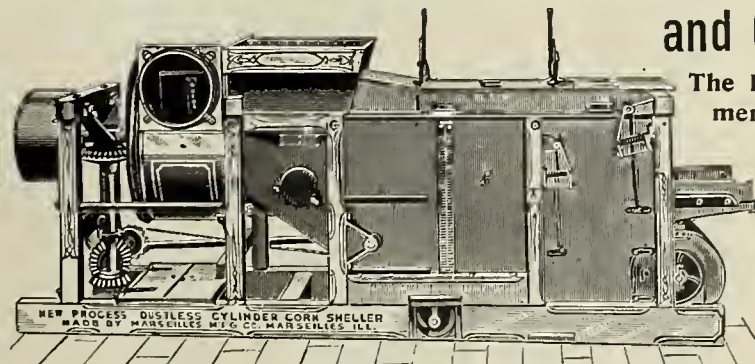
ALSO SAND, COAL DUST, GRAPHITE AND CLAY AND ORE OF ALL KINDS!

Automatic in operation, requiring no attention. Double  
the capacity of any other Dryer sold for same price.

THE CUTLER CO., North Wilbraham, Mass.

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**THE INK** QUEEN CITY PRINTING INK CO.  
SOUTH ST. CINCINNATI, O.

## THE NEW PROCESS DUSTLESS WAREHOUSE CORN SHELLERS and CLEANERS.



The Latest Improve-  
ments in Shellers  
and Cleaners.

Specially built for  
Mills and Eleva-  
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Catalogue Free.

A NEW PROCESS OF SHELLING CORN.

Some of the special features are: An Adjustable Cylinder, White Iron Shelling Parts, Spiral Shelling Head, Double Suction and Blast Fans, Positive Screw Feed, no Clogging, no Grinding of Corn, Cobs Left in Good Shape for Fuel, no Waste of Grain or Power.

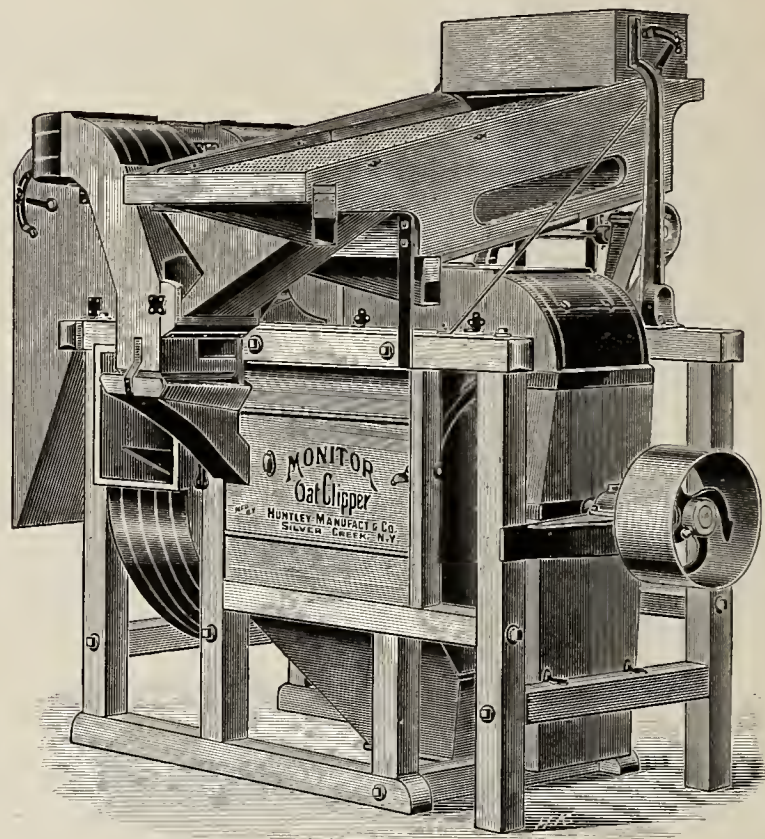
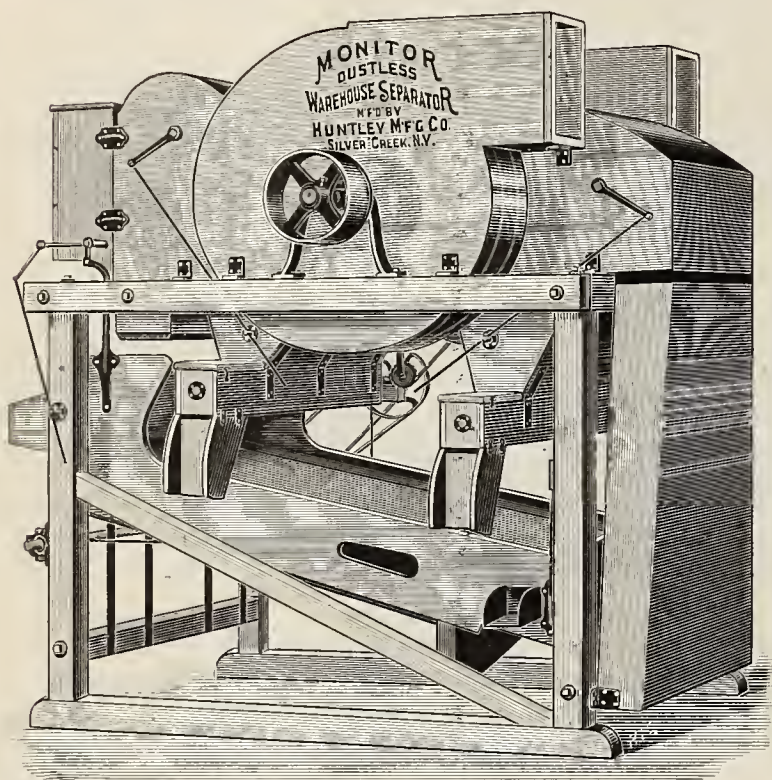
We make over 100 styles and sizes of Corn Shellers and can meet all demands. Address

MARSEILLES MFG. CO., MARSEILLES, ILL.



# The Monitors

## Grain Cleaners.      Oat Clippers.



Will give better general satisfaction than other makes.



About all of the leading cleaning elevators are equipped with Monitors.

This machine stands alone—AT THE TOP.

Conceded by all users to be the best Cleaner made.



The only Separator built with two fans and a special vacuum chamber.

Four separate and distinct air currents act on the grain. These currents are regulated from vacuum or exhaust chamber; hence are positive, regular, and evenly distributed.

Results! The highest class of work that can be done.



No grade grain in the screenings.

To make a long story short: convince yourselves by going into any of the prominent modern cleaning elevators. You will find the Monitors at work there.

***Bear in mind that the Monitor is not two single fan machines built together in one frame.***



Are quite a few steps in advance of any machines of this type built.

This is a strong claim, but, like all claims we make, we are prepared to demonstrate it.

They are high grade in every respect and, like the Monitor Cleaners, are generally selected by the builders of modern cleaning houses.

Clipping houses claim that they can obtain better and more economical results with the Monitor than with any other Clipper.

Special attention has been given to the construction of the machines, all weak points overcome, and to-day they stand—the best built, the most durable, the best looking, the easiest regulated, and the lightest running Clipper on the market.

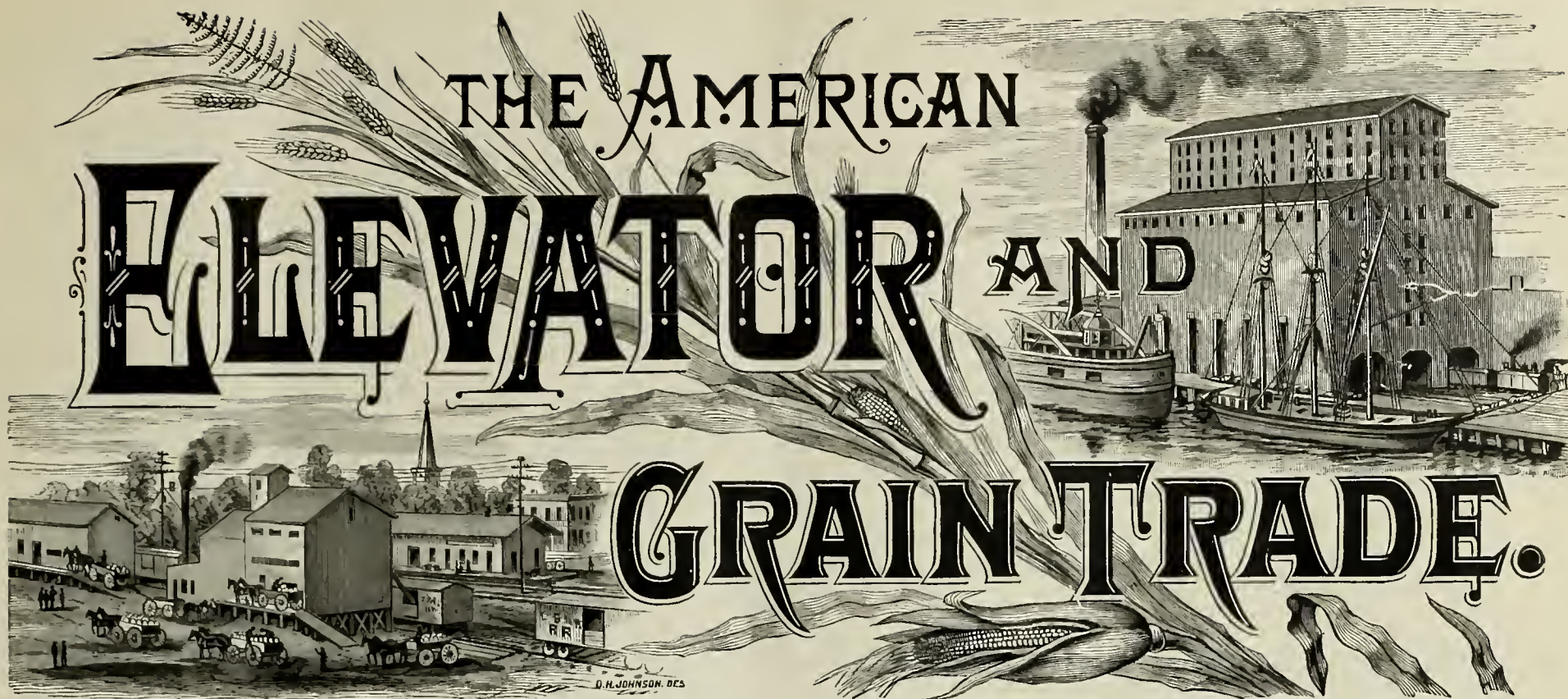


Do you need a Clipper? Are you in doubt as to the best? If so, go to any modern elevator (prominent house) and you will find them. That is all we ask. Your order will surely follow.

MORE MONITOR MACHINES IN OPERATION IN LEADING AND PROMINENT MODERN ELEVATORS THAN ALL OTHER MAKES COMBINED. WRITE US.

# Huntley Mfg. Co., Silver Creek, N. Y.





A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

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CHICAGO, ILLINOIS, MARCH 15, 1899.

No. 9.

{ ONE DOLLAR PER ANNUM  
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### A MASSACHUSETTS ELEVATOR.

The grain elevator of H. A. Crossman, a picture of which decorates this page, is located in the center of the beautiful suburb of Needham, situated twelve miles from Boston, on the N. Y., N. H. & H. R. Railroad, a spur track from which road runs within three feet of the rear of the elevator. The photograph shows us a building which, without doubt, harmonizes well with the elegance and neatness characterizing an ideal Boston suburb; there being here, if not architectural elegance, certainly enough of variety to the lines of the building to rob it of monotony, while the apparent free use of clean paint and a watchful care of the street frontage unite to take from the premises that air of indifference to one's neighbors and their feeling for the esthetic in urban appearances which might obtain even in business structures of this character which too often is associated with the "elevator" of the West. But we are new out West here, and when we are as old and as wise as Boston and her suburbs, no doubt all the esthetic niceties will be in the West quite as much a matter of course as they are supposed to be "down East."

The elevator in question is a cribbed structure, 28x32 feet in size, and 75 feet high. In its construction 2x6's were used for the outside walls and 2x4's for the partition walls. The cellar is well lighted, and besides the receiving bin contains a 36-inch Holmes & Blanchard Mill. The ground floor is used for bagging and for the shipping department. On the left is the entrance to the office, while on the right there is the feed mill, 40x45 feet in size and having storage capacity for 300 tons of feed.

On the second floor are six hoppers bins, two with capacity for 3,600 bushels each and four with capacity for 1,800 bushels each, making 15,000 bushels all told. In a brick wing on the left is a 15 horse-power electric motor, which furnishes the power needed to operate the machinery of the elevator and of the mill as well as the power shovel for unloading cars.

The plant, therefore, is as complete and well ap-

pointed for the business transacted as it is clean-looking as to its exterior; and it is gratifying to know that the proprietor is doing a prosperous business.

### THE CORN PROPAGANDA.

The American Maize Propaganda is making good headway in its preparations for the corn kitchen at the Paris Exposition. In Illinois the conference committee has agreed upon an appropriation of \$40,-

to handle the appropriation if made; but as Kansas usually evolves more politics to the acre than almost any other state, the project is threatened with an overdose of that commodity. It is hinted, for example, that, in case an appropriation is made, the commissioners will all be Republicans; and to this, of course, the Populists and Democrats object, so that Senator Lewelling remarked recently that "A suspicion of politics will kill the bill."

At Lincoln, Neb., Col. Carr, president of the Propaganda, received assurances that the Legislature would make an appropriation. The sum proposed is \$10,000.

The Legislature of Iowa not being in session, Gov. Shaw recently addressed a number of letters to leading farmers and business men of that state asking them what, in their opinion, he should do in this connection. The replies were largely in favor of the state's doing something, the members of the Legislature approached being particularly unanimous in expression in favor of an appropriation were that body in session, which it will not be until next winter, however. There were some objections by farmers' institutes to a state appropriation, but stronger objection came from the more prominent stock growers, who believe that the proposed exploitation of corn is unnecessary, since the feeding of corn is, in their opinion, more profitable to farmers than shipping it, which is, of course, true to a

degree, but only to a degree. However, under the circumstances, as next year would be too late to make an appropriation by the Legislature available for use in 1900, whatever is done by Iowa will have to be done by individual citizens of the state and not officially.

The Canadian Experimental Farm at Ottawa has been sending to many farmers of Manitoba and the Northwest Territories of the Dominion samples of what is known as Brome grass. It is said to be well adapted to a dry climate and to give a good yield, both for pasture and hay, so that it is really the best substitute for hay in those districts.



H. A. CROSSMAN'S ELEVATOR AT NEEDHAM, MASS.

000; and in view of the fact that this sum will probably be the largest single state appropriation, the committee has apparently undertaken to provide the necessary machinery to administer all the state appropriations by providing for an American Maize Commissioner whose salary and expenses are to be paid by the state of Illinois, and whose duty it shall be to organize and make the proposed exhibit of corn and corn products, with a special view to exploiting the value of corn as a human food.

In Kansas a somewhat similar bill is under discussion by the Legislature. It is fathered by W. C. Edwards, ex-secretary of state, who is expected



### CHICAGO ELEVATORS CHANGE HANDS.

The Chicago, Milwaukee & St. Paul Railway Company has purchased from the Chicago Terminal Warehouse Company and the City of Chicago Grain Elevator the two elevators located near Lake Street bridge, known as the St. Paul and the Fulton Elevators, the consideration being \$400,000. The Fulton Elevator, with the land, 147x107 feet, represented \$262,000, and the St. Paul, without land, \$138,000.

The two houses were first operated by Jesse Hoyt & Co., and after them by Munger & Wheeler, who sold to the English syndicate, of which P. B. Weare was managing director. In the reorganization of that syndicate's business the two elevators passed to the Chicago Railway Terminal Elevator Company, which now sells to the railway company. The St. Paul house is much the more modern in equipment. The two houses, which have storage capacity of 1,500,000 bushels, occupy nearly all of the 300 feet frontage on the North Branch, the engine plants being placed at the back of the lots.

The Railway Company will take possession of, or, at least, control the operation of the houses within the coming month; and naturally their management will devolve upon Armour & Co., who operate the other terminal houses of this road, giving that company storage capacity in Chicago of 13,500,000 bushels, and in Milwaukee of 3,000,000 bushels.

Meantime the Chicago Terminal Elevator Company, once owning the largest elevator capacity on Chicago River, is contracting its space, these sales having been preceded by the burning in August of the "Air Line" Elevator on the Northwestern road, which will not be rebuilt.

### THE BROOM CORN SQUEEZE.

The broom corn corner, mentioned some months ago in this place, has proved an entire success, the ideal figure of \$150 per ton for brush having been reached during the last half of February, with the certainty that prices will still further advance.

On February 14 a meeting of Illinois dealers and brokers was held at the Tremont, with T. F. Dunton of Chicago in the chair and G. S. Tarbox of Arcola, Ill., as secretary. At this meeting twelve Chicago and six Central Illinois firms, representing fully nine-tenths of the broom corn handlers of the country, were present. A discussion of the situation revealed the fact that the stock is now shorter than at any time for thirty years past, while both domestic and foreign demand has increased. It was, therefore, deemed advisable to advance the price of corn \$30 per ton, to take effect at once. This advance, the meeting decided, was warranted by the present situation, and it was believed this rise will be followed up by a still further advance during the early months this spring. At present about one-third of the year has passed since the last crop came in, and it is about seven months before the manufacturers of brooms will see the effects of the new corn on the market.

Ten days later the buyers of Central Illinois met at Mattoon and agreed to advance the price of brush to \$150, making an advance of \$50 per ton within four months; and as these men control the brush their figures will have to be met by buyers. The advance puts red self-working at 6 cents per pound; fair self-working at 6½ cents; good self-working, 7 cents. Chas. T. Marshall of Charleston, Ill., a veteran buyer, at the Mattoon meeting, was quoted as having said that, "There is now remaining in that district probably 2,500 tons of the precious brush. Less than 5 per cent of this is in growers' hands. Brokers in Mattoon, Arcola, Tuscola, Oakland and Charleston hold the rest." In connection with the brush corner, Mr. Marshall said there was also likely to be a corner on seed also before the planting season was over. Already dealers have bought up much of the available seed and growers understand its scarcity.

The price is now \$5 per bushel, and the season of 1886 may be repeated, when seed started at \$2.50 per bushel in February and reached \$1 per pound, or \$50 per bushel, in June.

On March 3 there took place at Arcola, Ill., the largest broom corn deal ever consummated in Central Illinois, if not in the United States, when W. M. Peck, of T. Peck & Co., Amsterdam, N. Y., purchased of Thomas Lyons & Co. one lot of broom-corn, paying therefor \$20,000. The purchase includes about 135 tons of brush of different grades, the price per ton being between \$120 and \$150. The consignment of corn if shipped at one time would occupy a train of forty cars. It required less than two hours to transact the deal.

Meantime broom manufacturers at Amsterdam, N. Y., the center of the industry, on February 24, advanced the price of brooms to correspond with the advance in brush.

### BROOK GRAIN COMPANY'S ELEVATOR.

The spirit of enterprise and improvement has invaded the village of Brook, Newton County, Indiana, and taken possession of the elevator of the Brook Grain Company, of which W. S. Cunningham is manager; but the cold weather came so suddenly and stayed so persistently that the elevator was caught by the photographer in half-dress parade, so to speak. A few warm days this spring, however, will enable the painters to finish their work, and



BROOK GRAIN COMPANY'S ELEVATOR.

then the improved house will be as neat and showy an elevator as one might wish to see.

The improved house is 64x28 feet, 32 feet high, with cupola 48x14 feet, 16 feet high, giving a storage capacity of 40,000 bushels, not including a corn crib annex 32x16 feet, 30 feet high, equipped with chain drag. The elevator equipment consists of three stands of elevators with 12x6½-inch buckets, one corn cleaner and 40-foot conveyor to carry grain to any bin in the house as well as to the shipping bin, which is located above a Fairbanks Hopper Scales, for weighing grain loading out. There is also in use a Marseilles New Process Sheller and Cleaner. The elevator improvements have just been completed and the house is in first-class shape to handle grain quickly and economically. The power is a 25-horse power steam engine.

Brook is a thriving town on the Coal Branch of the C. & E. I. R. R., in the center of the famous agricultural Newton County, where the farmers raise immense crops of corn and oats. There are a number of prosperous grain buyers in that county, but none are more deservedly popular than the Brook Grain Company. The company does business strictly by safe business methods and prefers track selling. This has been Mr. Cunningham's method for 12 years and he attributes his success to it, and, he might have added, to his strict business integrity also. The elevator ships to Chicago and also to the East as well as to interior Indiana and Michigan points.

The words corn and storm were spelled in the year 700 precisely as they are spelled now, having preserved their apparent form (with the loss of the trilled r in Southern England) for 1,200 years, to our certain knowledge, says W. W. Skeat in Notes and Queries. Hence these words must be of extreme antiquity, and it becomes difficult to limit the time of their origin.

### SAMPLING OF GRAIN AT CHICAGO.

The special committee of the Chicago Board of Trade Association, appointed to investigate and report upon the matter of a change in the manner of taking samples of grain, reported on February 20, to a meeting of grain receivers held during the afternoon. The committee reported that it had taken the views of various interests and had found that a majority were opposed to a radical change from the present system.

In the report the committee presented the principal objections to the adoption of a system with one official sampler and asked that the directors appoint all receivers' agents as official samplers. The principal objections are, in the opinion of the committee, these: That the majority of the buyers of grain are not willing to accept the sample of one official sampler as final between themselves and the seller; because (1) it would necessitate, in case the car should be found not up to sample, the adjustment of a claim with the sampler, instead of the present privilege of refusing the grain; and (2) the difficulty of establishing a claim against an official sampler, if at eastern destination the property proved to be not up to the sample. In times of freight blockades a given car often does not reach final destination until two months after it has been bought at Chicago, and it would be impossible under such circumstances to make a satisfactory adjustment, or to save the original samples for that length of time. (3) The seller's chief objection is that the official sampler would be likely to bring the poorest grain as a sample of the car for self-protection.

The committee therefore recommended that the present receivers' agents who are deemed competent and whose samples have been reliable receive the indorsement of the receivers and handlers of grain for appointment as official Board of Trade samplers, to be appointed by the directors of the Board of Trade, and to be under the direct supervision of the "other inspection committee" of the Board of Trade.

It was also recommended that the Board of Trade directors adopt regulations to govern such official Board of Trade samplers, and the sampling of grain, and that these regulations require that whenever an official Board of Trade sampler shall have been found negligent or careless in his duties, or of having knowingly allowed incorrect samples to be furnished, his commission shall be canceled, and he shall not thereafter be appointed as an official Board of Trade sampler.

The committee say they feel satisfied that the above suggestions and recommendations to the Board of Directors, if carried out by them, would make an improvement on the present system of sampling grain on western roads, and would be much more satisfactory to the whole trade. It was also decided that nothing contained in the report should be construed as denying the right of the buyer to resample grain, as at present is the custom.

### THE EASTERN ELEVATOR OFFICERS.

The annual election of officers of the Eastern Elevator Company of Buffalo, N. Y., was held recently and resulted in the choice of Geo. L. Lewis as president in place of Judge Lewis, Geo. C. Hollister of Rochester as vice-president, in place of Horace Reed, and William P. Northrup as secretary and treasurer. Subsequently Mr. Northrup resigned and R. L. Forsburgh, of James Stewart & Co., elected in his place, thus making a complete change in the management of the business.

This upheaval in the management of the elevator is said to be the aftermath of the sensational operations in the company's stock last fall on the New York Stock Exchange, as reported in the December number of the "American Elevator and Grain Trade." The manipulation of the stock, it will be remembered, caused the forced retirement of one of the oldest members of the Stock Exchange and the suspension for a long period of another member, as well as much pain in the region of the pocketbook to various other members and their clients.



**SOME NEW ELEVATORS.**

The Galveston Wharf Company of Galveston, Texas, announces that it will build an addition of 500,000-bushel capacity to its grain elevator, giving the house a storage capacity of 1,500,000 bushels. The company's Elevator B is leased until September 1 next, after which time the Wharf Company will operate both elevators for public account.

The Inland Elevator Company of Toledo and Chicago will begin the erection of a transfer elevator at Knox, Ind., where eight acres of land on the "3-1" tracks have been donated. Two miles of side tracks will be laid. The Inland Elevator Company will erect ordinary elevators at all stations along the L., I. & L. road from South Bend to Monroeville and the grain will be shipped to Knox from these points for gradation and shipment to Eastern markets. Working at its fullest capacity the Knox elevator will be able to handle 50 cars of grain a day. The L., I. & L. road is preparing to make \$25,000 worth of improvements in order to handle the business of the elevator.

Plans for a new steel elevator for the Great Northern Railroad Company to be erected at Superior, Wis., have been prepared. The building will be 361 feet long, 96 feet wide and 216 feet high.

The ordinance granting the Illinois Central Railroad Company the privilege of laying tracks along the New Orleans river front from Stuyvesant Docks to a point above the city having been adopted by the City Council on February 28, that company will proceed to the erection of a new elevator on the property adjacent to the Stuyvesant Docks. The new franchise gives the railroad a connection between its docks and the main lines of the I. C. and Y. & M. Valley roads in place of the Louisiana Avenue route now in use, the franchise of which expires in December next, and thus insures a permanent entrance of these roads into the city to the Stuyvesant Docks.

**THE IOWA-MISSOURI ASSOCIATION.**

The annual meeting of the Grain Dealers' Union of Southwestern Iowa and Northwestern Missouri will be held at the Grand Hotel, Council Bluffs, Iowa, on Wednesday, March 22, 1899. The afternoon session will be held at 2 o'clock p. m., while the evening session will begin at 7:30, the annual election of officers taking place at the evening session. The secretary, G. A. Stibbens, Coburg, Iowa, has issued a circular specially urging grain dealers to attend, which has no doubt been sent to all dealers in the territory covered by the Association, but in case the reader has not received such notice direct, we feel warranted in saying to each and all regular dealers that they will be welcomed at this meeting without a special invitation.

This Association was organized just three years ago (March 19, 1896), at Red Oak, when 25 dealers met to talk over the situation, 19 of whom became charter members of the Union by signing the constitution and by-laws. Prior to that time, as the secretary said in a paper read by him at the Chicago meeting of the Grain Dealers' National Association, "the grain trade in the territory now covered by this Union was so thoroughly demoralized that it was simply impossible to get a profit out of the grain handled." There were from one to three scalpers at every station, farmers were shipping their own grain, and not infrequently the regular dealers in their scramble for the grain paid more for it than even the track buyers, and were themselves scalping at other stations.

The Association had a good many things to contend with on the start, such as a want of nerve on the part of the members and dealers generally, who were fearful of the aggressive policy of the Secretary and President Hunter; then there was the scalper, who was always a bete noir; and the opposition of the commission houses, who were out for business no matter where it came from; and the jealousy of competing dealers, who would insist on getting the

grain or making their competitors pay for it more than it was worth; and so on.

But one by one all these evils were all overcome, and to-day, the Secretary writes: "The trade is in better shape than ever before." It needs, however, the constant supervision of the Union, which in turn must have the moral support of the dealers to keep the trade in its present satisfactory condition. The Union also seeks to broaden its sphere of influence, and therefore invites all regular dealers in that part of Iowa and Missouri to "come to Council Bluffs prepared to speak a good word for the work that has been done and to aid in formulating plans for the Union's future success."

**THE WEST ELEVATOR AT SWEA CITY.**

The West Elevator, as it is known in Swea City, Iowa, is owned by Kruse & Dunn, who bought it last spring and opened it for business on July 1. It is located on the B., C. R. & N. Railroad, and has been doing a nice business since the present owners took possession; and this in spite of the fact that there are two other elevators in town, owned by Chas. Ripple and Livermore Bros., respectively, and of the further fact that there is also a scoop-shoveler in town who perhaps manages to make life interesting for the three regular dealers whenever



KRUSE & DUNN'S ELEVATOR AT SWEA CITY, IOWA.

things begin to get too easy or monotonous. We don't just know how this particular scooper behaves, but as a rule a scoop-shoveler in town is a first-class substitute for the "sporting life," which is never dull, although somewhat wearing on the system.

The Kruse & Dunn house was built some five years ago. It was well built, and is now in good condition; but it has no specially noteworthy features, if we except the somewhat unexpected location of the stairway to the cupola, which suggests the bridge of an Atlantic liner or the approach to the Texas of a lower Mississippi boat. The house has 20,000 bushels' capacity, and boasts of a Charter Gas Engine from Sterling, Ill., as motive power.

Kruse & Dunn buy stock as well as grain and seeds, and also handle flour. They are popular with their trade, which has been very satisfactory to them since its beginning in July last.

**ANOTHER CANADIAN ROUTE.**

Henry Corby, M. P., of Belleville, Ont., suggests another rival to Toronto as an intermediate or reshipping point for grain between the lakes and tidewater at Montreal. He proposes to build an elevator of 500,000 or 1,000,000 bushels' capacity at Belleville, which is half way from Midland to Montreal, if the Grand Trunk road will deliver grain from Midland to this elevator, which would transfer it from the cars to barges for shipment to Montreal, and also establish the barge line. Midland and Belleville are now termini of the Midland division of the Grand Trunk, and the route would be 113 miles the shortest proposed, while the barge route would be entirely landlocked from Belleville to Montreal.

**SOME ARMY CONTRACTS.**

The quartermaster's department at New York City, on February 28, opened bids for hay and oats for army use in Cuba, the advertisements covering 456,000 pounds of No. 2 clipped white oats and 1,600,000 pounds of No. 1 timothy hay. The oats contract was let to H. Ingersoll at \$1.31½ per 100 pounds, and the hay contract to C. L. Rickerson at 54½ cents per 100 pounds.

On the same day bids were opened at Cincinnati for 3,500,000 pounds of timothy hay, 2,500,000 pounds of oats, and 380,000 pounds of bran, to be delivered in Cuba. The lowest bids on the hay were 92½ cents per 100 pounds, delivered at Havana, or 96½ cents, delivered at Matanzas; those on oats were \$1.419 per 100 for No. 2 mixed, delivered at Havana, or \$1.509 at Matanzas.

Of these latter bids that of Early & Daniel for 1,300,000 pounds re-cleaned white oats at \$1.47 per 100 pounds was accepted by the government. New York bidders of the same date got the hay and bran contracts.

This is the first opportunity Cincinnati dealers have had to bid on forage for the army in Cuba, the privilege having been obtained February 25 through the personal efforts of H. Lee Early, of Early & Daniel, who visited Washington in the interests of the Cincinnati grain trade. Mr. Early secured also while in Washington a rate from the Southern Railway, putting Cincinnati shippers on an equality with New York shippers, who have hitherto had no competition in the bidding on government forage to go to the army in the West Indies.

Further bids were asked for oats, etc., both at Cincinnati and at Chicago, which were opened March 13.

**NEW GRAIN HOUSE AT PITTSBURG.**

The new storage plant and grain elevators of the Henderson-Johnston Co. of Pittsburg, Pa., replacing the establishment of the company burned a few months ago, have been finished. The new unique plant consists of a three-story brick building, having a frontage of 61 feet on Carson Street and extending back 700 feet to the Pittsburg & Lake Erie Railroad tracks. The floor space is equal to about 80,000 square feet. The power house stands between the railroad tracks and the river and is entirely separated from the main building. It contains a 400 horse-power Corliss engine, which impels the machinery of the grain elevator and feed department, as well as of the cold storage house; also two dynamos of 90 horse power. There are also on the premises four motors of 40 horse power each.

The grain department consists of steel tanks, aggregating 100,000 bushels' storage capacity, erected over the railway track, which runs through the main building, and has track room for fourteen cars at one time. Grain is unloaded by electric shovel handling a carload in about twenty minutes. The machinery of the feed department consists of grain cleaners, cat clippers and feed mills. The hay and feed department has storage room for 500 carloads of hay and 8,000 tons of feed.

In addition to the feed business, the company does a large commission business in poultry, eggs and produce, and a part of the plant is devoted to cold storage for eggs and other perishable produce.

The firm is composed of Capt. James A. Henderson and G. W. C. Johnston, who have long been identified with the river transportation interests and who in this plant do, as will be understood, a quite diversified business, including, in addition to the lines referred to above, the business of storing furniture and general merchandise.

Duluth has again broken her monthly record, having received during February 2,673,147 bushels of wheat and 1,721,916 bushels of corn.

The present year marks the centenary of the discovery of beet-root sugar, which was announced by Franz Karl Archard, the director of the Prussian Academy, to Frederick William II, on January 11, 1799.



### THE ERIE CANAL SEASON.

Mr. Aldridge, superintendent of public works during the Gov. Black administration of New York, in his annual report, filed February 25, puts the total number of tons of freight carried by the New York canals at 3,360,063, of which 2,314,050 tons went eastward and 1,046,013 westward. Of these the Erie canal carried 2,336,000 tons. The total expense of the canal to the state was \$685,348.15, of which \$660,794.95 was charged to repairs.

The past season, the report says, was not a good one for the boatmen generally, and the superintendent predicts that succeeding seasons will not be better unless the canal improvements are carried out, making a large canal provided with modern systems of traction. The superintendent believes also that the state should encourage the formation of financially strong companies for canal transportation.

Meantime, as the season advances toward the spring opening of business, the expectation is that the spring classification of the boats by the insurance companies will reduce the number allowed to carry grain by about 200, leaving less than 500 which will be able to get insurance. This big reduction of the canal fleet would make it possible for the canal to carry not to exceed 24,000,000 bushels of grain

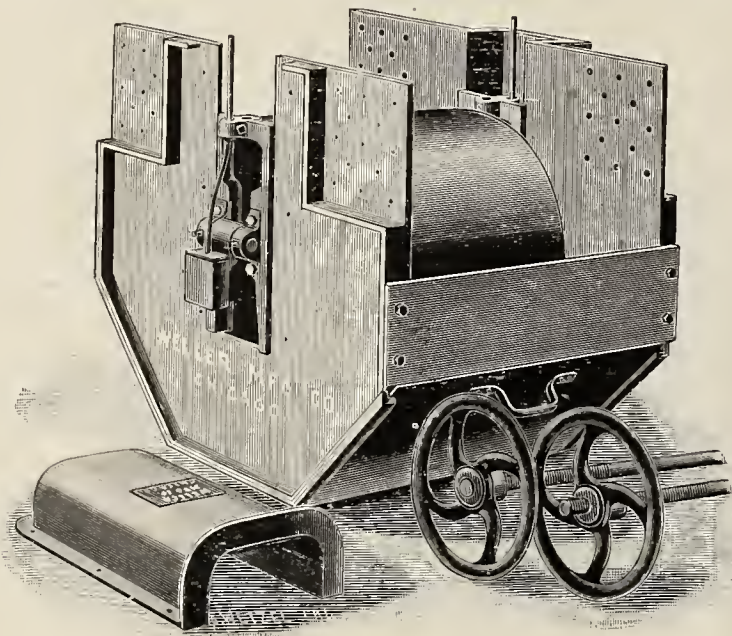
satisfactorily pass an examination by satisfactorily grading a large sample. The grades may be continued as now, but be accepted by federal officials. This plan would give all interested the right to a hearing and would increase our foreign trade under an unchanging and reliable inspection."

The committee propose that properly qualified scientific men should be attached to each inspection district, whose business it should be, among other things, to test wheat arriving for inspection in a chemical way as to its milling quality and to apply such other tests as would be necessary "to bring the matter of inspection nearer to an exact science and make it less and less a matter of judgment only." This kind of inspection, the committee contends, would give to inspection certificates the indorsement of the government, and make them acceptable, without qualification, in every market.

The committee will, it is announced by the report, prepare a memorial on the subject for presentation to Congress, asking for legislation in this direction.

### A HEAVY-DUTY ELEVATOR BOOT.

The boot shown in the accompanying illustration is a specially heavy elevator boot, which was designed by the Weller Mfg. Co., Chicago, to meet the requirements of one of their customers. It is of



HEAVY-DUTY ELEVATOR BOOT.

(reckoned in wheat), allowing to each boat the maximum of six trips from Buffalo to tidewater. This would be about equal to the canal's business of last season, with say 700 boats in commission.

### A FEDERAL INSPECTION SYSTEM.

The report of the special committee of the North Dakota Legislature sent to Minnesota to investigate the grain inspection system at Minnesota terminal wheat markets has made its report, in which the opinion is expressed that a federal system of grain inspection would be the solution of the whole grain inspection question of the country. The grain business, the committee says, is of too great importance and magnitude to be subjected, as it is, to local influences or the semi-control of states or state officers. The committee's position is summed up in the following paragraph taken from the report:

"The right of the people of every state to be heard in the inspection of grain cannot be disputed. It seems imperative that inspection be done at lake or tide river points. Neither the large elevator, railway and vessel interests nor the interior agricultural interests should be interrupted or be subject to interruption by state politicians, or by the local ambitions of vessel-port citizens. As a solution: Provide federal inspection under the secretary of agriculture by districts, with districts for Lake Superior, Lake Michigan, North Atlantic, South Atlantic, North Pacific, South Pacific and Gulf, with such other districts as may be necessary, all under civil service rules, which should provide that all applicants for inspector have had not less than five years' experience in the buying of grain and also

a type, however, that can be used to good advantage by the majority of the large elevators throughout the country. It is, in fact, a natural and laudable reversal of the tendency of recent years among the manufacturers of elevator boots, which has been to lighten them to the danger limit in order to produce something that could be offered at a low figure.

The boot illustrated embodies many new features, the principal one being the bearings of the pulley, which, although of the rocking pattern in a modified form, are made similar to railroad car journals, a stuffing box being provided on each bearing. The bearings are inclosed also to prevent dust from entering, and with one filling will run several months without attention.

The Weller Mfg. Co. also manufacture one of the largest general lines of elevator boots on the market; and are, of course, in addition to the above style, prepared to furnish boots for lighter work. Their illustrated catalogue of nearly 200 pages, containing descriptions and illustrations of grain handling appliances, will be cheerfully sent to all interested parties upon request.

W. W. Ogilvie, the well-known Canadian miller, was one of the first grain shippers from the "Head of the Lakes." This was early in the 70's. The grain was bought at Red Wing, Winona and La Crosse and shipped up the river by boat to Stillwater, and from there to Duluth by rail over what is now the St. Paul & Duluth, to the latter city. The freight by rail was 5 cents per bushel. The grain was then shipped East to the mills over the Beatty line, which had been subsidized by the Canadian government.

### PROBING MINNESOTA INSPECTION.

The everlasting Minnesota inspection question is still grinding out testimony before the Jacobson investigating committee of the Legislature. The farmer witnesses, especially the smaller producers, were nearly unanimous as kickers, their grain having been graded, they allege, too low. On the other hand, Oliver Dalrymple, who raised and shipped last year about 175,000 bushels of wheat, had little or no complaint to make on the score of grades. He thought the present system is as good as any, especially when it is considered that it has been an evolution from the growing demands of the wheat-growing industry. He would recommend no radical change; but basing an opinion on his experience of over 20 years as a wheat grower, he would abolish the "mixing houses," and make all grain handlers public warehousemen so as to bring them under state control and to provide facilities for quick transportation.

There were some hot roasts of the inspectors, of course, by complainants, and many things were said by witnesses, both orally and by letter, which made their ears burn, no doubt; and many alleged instances of discrimination and apparent stupidity were put on record coming from farmers and country shippers, who called the whole system a "steal;" so that, aside from Mr. Dalrymple, Mr. R. S. Munger, the owner of a 1,400-acre farm near Wheaton, S. D., was about the only farmer to distinguish himself by an apology for the inspection. He testified that he "had no kicks coming," and that he thought it reasonable to expect that grain would get as high a grade as possible, for he believed the inspectors generally graded as high as they could. He favored, however, a board of appeals, and believed that the time would come when a state elevator would be established in Duluth.

The investigation as reported by the St. Paul press has not been without interest, however dismal in other respects, in the way of suggestions of a more or less novel character for modifications of the inspection and elevator system. For example, among the witnesses was Channcey E. Foster, chemist and flour tester of the Northwestern Consolidated Mills of Minneapolis, who explained his own method for examining wheat, which is indorsed by other experts, among whom is Prof. Hayes, of the State Experimental College. Instead of inspecting wheat by the present methods, which is based on the judgment of the eye only, he would take simply 100 kernels of wheat from each lot of wheat offered for inspection, and make an estimate of the value of the grain from that sample. If the 100 grains weigh a given number of grammes, the grain is to be classed No. 1 hard; if they weigh less it is classed No. 1 Northern, and so on. The amount of dirt is estimated in somewhat the same way, and thus the proper dockage is arrived at. Mr. Foster testified that his own experience leads him to the conclusion that three men can inspect grain in this way at the rate of 100 cars daily. His system would involve an increase of clerks at inspection terminals, and would also increase the number of grades of wheat. For example, there would be No. 1 and No. 2 Hard, the same of Northern, White and Winter wheats, etc., perhaps a score in all, each having a different value and, accordingly a different cash price fixed, according to quality. This system, Mr. Foster contended, would eliminate dockage, and would be likely also to induce the farmer to clean his grain at home in order to save the screenings he is now giving away, and would tend to insure uniformity of grades from season to season. The plan looks complicated, certainly, but perhaps it would, from a miller's point of view, be preferable to the present system, if the differentiations of grades could be preserved throughout the course of the grain from the inspection tracks to the consuming miller, which is doubtful.

A Deer Creek shipper of forty cars, who had lost heavily, more by shortage than by low gradings, however, testified that he would like to have



the sweeping out of cars by contract prohibited; have state elevators at Duluth and at the termini of the Erie canal; and have the mixing houses prohibited.

### THE ELECTRIC GRAIN ELEVATOR AT BUFFALO, N. Y.

This important factor of the elevator capacity of Buffalo, N. Y., received its name from the fact that it was the first grain elevator in that city to use machinery moved by power generated by the great falls of Niagara and electrically transmitted to Buffalo. That feature alone would have given it prominence in a certain way for a time; but a more permanent interest is attached to it by its form and modus operandi; for, however familiar the steel tank elevator may have become since 1897, when this house was erected by the Steel Storage and Elevator Construction Company of Buffalo, this type of grain elevator will not be likely to become commonplace for some time yet to come among elevator and grain men who handle grain to secure good results, both

Among the features characteristic of this type of elevator are the absence of dust, due to the storage of the grain in the tanks, and the weighing of the grain in the main building and not in scales in the movable towers.

The power equipment is of course interesting. It consists of a series of motors varying in size from 40 to 75 horse power each, aggregating 450 horse power. They are of the Tesla induction type and take power from three wires, the currents passing through self-cooling transformers, which reduce the pressure from 2,200 volts three-phase to 200 volts two-phase.

### THE NORTH DAKOTA REPORT ON MINNESOTA INSPECTION.

The special committee on grain inspection of the North Dakota Legislature, whose junket to Minneapolis and Duluth has been previously referred to in these columns, has made its report. It is a lengthy document, covering the subject in an ex-

its journey, "might [would?] operate against the state system if this arrangement with the roads could not be made easily, and would be fatal to it if it would not be made at all. Moreover the volume of business at the terminal recognized by business men gives a value to an inspection certificate which a state, or arbitrary terminal, certificate would not have, the latter market being necessarily narrow and unimportant." The principles involved in this consideration of the matter are illustrated by the conditions at Duluth and Superior, where the present greater importance of Duluth as a market is such that the Duluth inspection governs even at Superior, in another state, whose competitive inspection system has, in fact, been tried locally and abandoned under the pressure of business requirements. The committee are opposed to competitive inspection, believing uniformity preferable; but are, however, of the opinion that Superior will eventually overshadow Duluth, when perhaps the Wisconsin inspection laws will be adopted by the trade in preference to those of Minnesota; but this change will be brought about, not arbitrarily, but by the influence of the larger shipping interests of Superior.

Having thus disposed of the no-inspection and the state-inspection branches of the subject, the committee turns to a consideration of the existing inspection system at Duluth. This, the committee says, is "good in theory." The weighing system, the committee says, is perfect and the law excellent, so that the complaints are due to inability or indisposition of inspectors. The latter's judgment may be influenced at times, the committee thinks, by the powerful concerns interested; but the certificates of the system stand well, and a radical change should not be made in the matter of appeal; but since the present system is both expensive and involves vexatious and unavoidable delays, which defeat the purpose of appeals, the committee recommends the establishment of appeal boards at Minneapolis and Duluth, with provision for immediate action on appeals and quick decisions. These boards should be continuously in session; and if established on such a basis they would insure uniformity and stability of inspection, and there would be given to the inspection the advantage of the judgment of several men, instead of practically only one. It would be a check on the inspection department, and, it is believed, would assist in securing fair and just remedies to the shippers immediately. These latter recommendations have already been embodied in a bill which has already passed the lower house of the Minnesota Legislature, and will no doubt become a law.

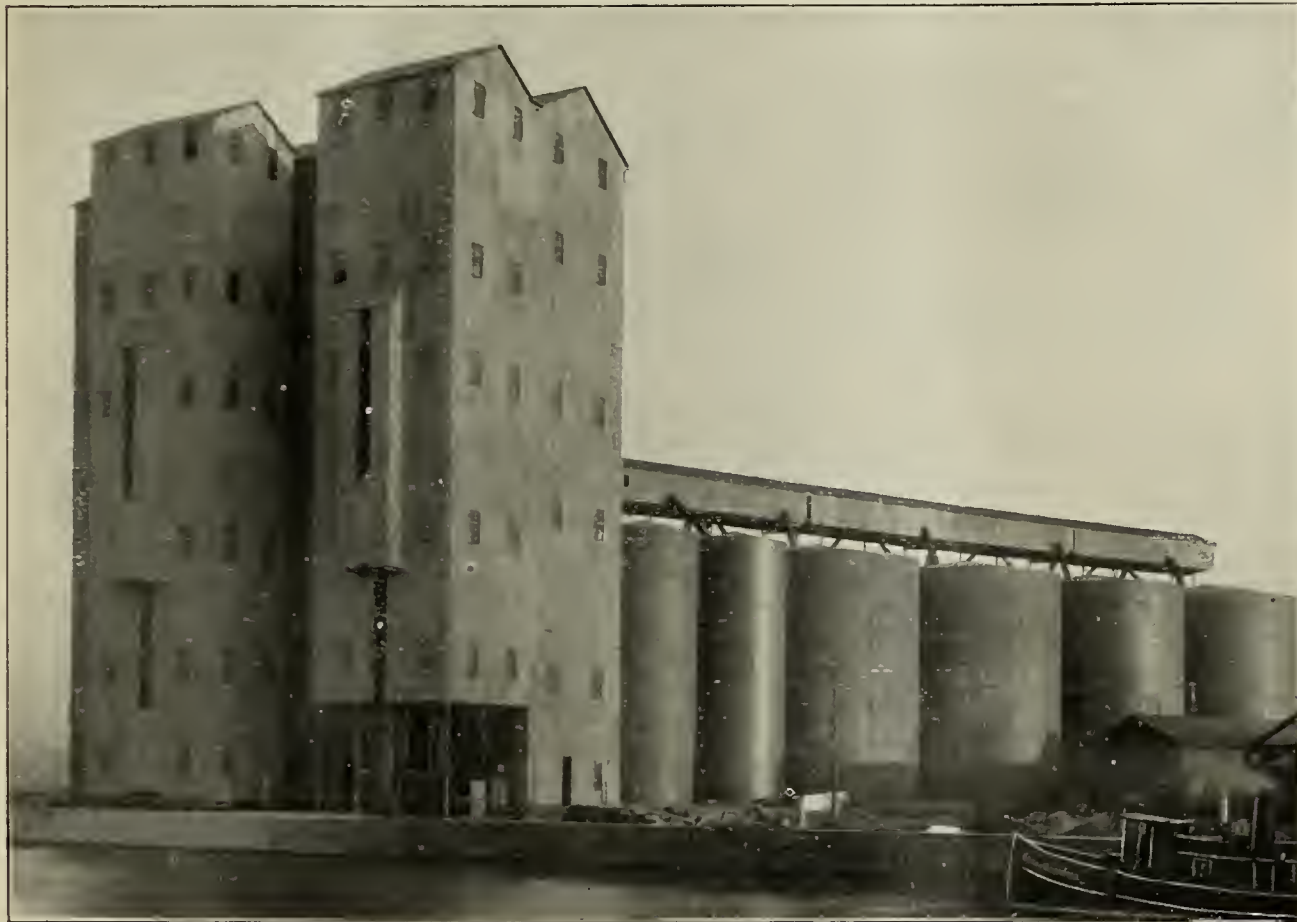
### INSPECTION AT ST. JOE, MO.

The question of abolishing the grain inspection system at St. Joseph, Mo., has been talked of for several weeks, and on February 28 a majority of the Railway and Warehouse Commissioners of the state met with the grain dealers in St. Joseph, to canvass the question on the ground.

Every dealer in the city was represented at the meeting, which was unanimously opposed to the abolition of the inspection. F. B. Broughton is the present inspector, receiving as his pay a fee of 40 cents per car of grain inspected, and is willing to continue in the position on that basis; but it is now proposed, in case the system is continued, to make the office a salaried one, which would be satisfactory to the grain men, at least. The commissioners spent the day in St. Joseph, but did not, before leaving, announce any conclusion as arrived at.

Grain men regret that the elevator facilities of St. Joseph are inadequate to an increase of the business; and a large part of the grain now goes through the city without leaving the cars, although inspected both on arrival and on departure.

W. J. Connors, contractor for handling grain with the shovels at the port of Buffalo, N. Y., has made his appointment of assistants. Wm. Hurley will be superintendent, and will have as assistant Wm. Kennedy for the first, Edward Sheehan for the second, and John F. Egan for the third division. These divisions cover 24 elevators.



ELECTRIC STEEL ELEVATOR AT BUFFALO, N. Y.

in the care of the grain itself and in economy of cost of its movement.

The Electric Elevator, a picture of which appears herewith, is entirely fireproof and has a storage capacity of 1,000,000 bushels and handling capacity of 24,000 bushels per hour receiving and 20,000 bushels per hour shipping. It stands on Buffalo River, and has a foundation of bedrock, found at only seven feet below water level. The main building and marine towers, as well as the elevator legs, garsers and scale hoppers, are all built of steel, while all machinery in the house stands on steel girders. The site and machinery are large enough for an increase of tank capacity to 4,000,000 bushels. The plant consists of a structural steel building, 38x126 feet in size, 146 feet high; a stationary and movable towers of steel, 28x32 feet each, of the same height; a steel belt gallery over the tanks 17 feet wide and 204 feet long, and 80 feet above the ground level; and finally a group of nineteen steel grain storage tanks. These tanks are of various sizes; seven having capacity of 100,000 bushels each and the other twelve of 25,000 bushels each, four of the latter being subdivided into four bins each to hold about 6,000 bushels per bin. The tanks are all airtight and moistureproof, as well as fireproof, so that grain may be stored in them for an indefinite period without danger of heating, even without the usual turning required in the old-style elevators. All tanks have self-cleaning hopper bottoms.

haustive manner; but the salient points are about the following:

Taking up, in the first place, the question of abolishing the inspection system entirely, the committee find that this would be quite impracticable. Inspection does not, of course, affect the actual quality of the grain; it is, in fact, but an official expression of opinion as to what that quality is; and so the inspection certificate is only an official "certificate of character," so to say, good or bad, as the judgment of the inspector shall elect. The inspector, therefore, gives the grain nothing but its proper standing as an article offered on the public market and thus facilitates its transfer and also acts as a check upon the commission merchant, since inspected grain always sells at a premium over uninspected grain of the same quality. Generally speaking, the committee is of the opinion that "inspection is a benefit" and that "it would be impracticable to do business without it."

Advancing a step further, the committee conclude, upon the question of inspection at terminals within the state of North Dakota, that this "must come naturally, with the growth of business and cannot be forced." The inspecting terminal is, in short, an evolution, begotten in the very nature of business conditions and requirements, and not the product of theorizing. The necessity, therefore, of securing an arrangement with interstate roads to permit the unloading, inspection within the state, or at the state line, by state officers, and its reshipment to finish



## PNEUMATIC GRAIN CONVEYORS.

The genesis of the economic changes of the past thirty years has been traced by the late Hon. David A. Wells to the opening of the Suez Canal. Although steam ocean navigation had been thoroughly established for many years prior to 1868, yet the opening of the Suez Canal, by shortening the route from Europe to the Far East and thus making the use of steamers on that trade practicable, gave an enormous impetus to the construction of steamships and the improvement of marine engine, which since has effected the practical re-

moval of the sailing vessel from the international carrying trade, if not the coasting trade also. The supremacy of steam having been established, the subsequent development of ships has been in the direction of speed and size combined with economy of operating expense. Forty years ago 300 tons was considered a good cargo of grain; to-day a dead weight cargo in the trans-Atlantic trade of 13,000 to 14,000 tons is not unusual.

This increase of carrying capacity has brought with it problems of loading and discharging vessels, stimulated by their daily expense in port running from \$200 to \$500, the solution of which has involved the questions of speed and cost, and the mixed character of the modern cargo. The earlier methods employed the hydraulic crane, which, by the use of buckets for lifting grain, answered fairly well the double requirement presented by the presence of packages as well as grain in bulk. The problem of elevating the latter was not, however, satisfactorily solved by the crane and bucket system, which were lamentably deficient on the side of speed.

This want of a more efficient method for discharging grain cargoes at the great ports of England and the British Isles was brought to the attention of Fred. E. Duckham, engineer of the Millwall Docks of London, who applied to the problem the principles of pneumatics. His system is not wholly a novelty to Americans, who have themselves fathered the Smith pneumatic system; but Mr. Duckham has carried his ideas to a more complete stage of development, and has demonstrated by its daily use the practicability of his system, which he has described very completely in the November, 1898, number of Cassier's Magazine, in an article with illustrations, both of which the editor has kindly permitted us to here reproduce in part.

Two types of pneumatic elevators of the writer's invention are now in use—one which "works by suction set up by partly exhausting the grain-receiving tanks into which the air rushes through semi-flexible pipes from the ship's hold, bringing the grain with it," as shown by Fig. 1; and (2) those "which employ air under pressure as well." In the latter system "the grain is received by the suction process, but is blown from the elevator

into the warehouse or receiving vessel by compressed air," as shown by Figs. 2 and 3.

"The dominant features of each type," says the inventor, "are, to begin with, the construction of the inlet nozzles of the grain-conveying pipes in such a way that the air, in the correct proportion and speed for each description of grain, may enter the pipe, and in doing so pick up the grain and by admixture float it along. It is found that the current of air collects and lifts the grain in a gyratory stream, having a speed of 20 to 30 feet per second, and that this touches the end of the pipe only." This inlet nozzle is attached to a flexible

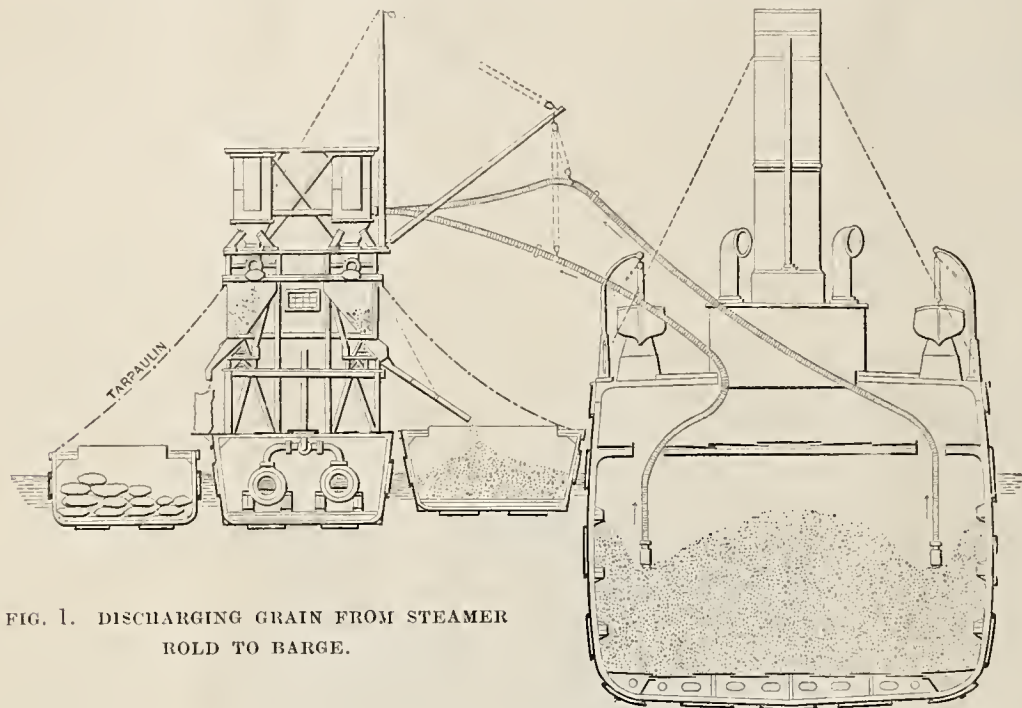


FIG. 1. DISCHARGING GRAIN FROM STEAMER HOLD TO BARGE.

hose for shifting from place to place in the hold, and is protected against wear by a steel lining. In the second place, "by means of an automatic air-lock, the grain discharges itself from the receiver into which it has been sucked, or finds admission into the chamber from which it is to be expelled. This air-lock consists of a twin-box rocking on trunnions, one side emptying while the other is filling, an air-tight sliding joint being provided between the loading side and the supply." The purpose of this construction is to deposit the grain gently wherever desired and not to shoot it out with a rush. The construction of the nozzles also permits a separation of the grain and the dust from the air, which is drawn off to the exhauster.

This system is now in practical operation at the

suspended by suitable tackle, and may be swung to the cargo, wherever it may be. The grain being drawn up through these suckers soon finds itself in the cylindrical receiver, makes its way out through the air-lock and is weighed and delivered in sacks or bulk to the consignee's barges."

The machine at the Albert Docks has discharged grain at the rate of 135 tons per hour, to which capacity the Thames system of delivering grain in sacks practically limits it.

The machine at Limerick is similar, but is further able to blow grain into the warehouse or the hold of another vessel. The added machinery for this purpose "consists of two compressed-air chambers under the deck, into which the stream of grain, after being weighed, may be directed through automatic air-locks, and whence it is expelled by air under pressure of, say, eight pounds per square inch, through two lines of 8-inch pipe laid under the wharf and up along the roofs of storehouses. It then deposits itself through suitable outlets." The machine was built to handle 70 tons per hour but has handled as high as 103. Figure 3 represents also a machine intended to transfer wheat from barges into the exporting ship while lumber and other goods are being shipped simultaneously at the same hatchway. Its ability to suck grain from all parts of the vessel without the delay of moving the elevator from hatch to hatch is its characteristic and valuable feature. The grain may, moreover, be screened, graded and weighed during the transmission, and may be delivered in sacks or in bulk.

The principal advantages of the Duckham system of elevating and conveying grain are thus summarized by the inventor (see p. 35, Cassier's Magazine, November, 1898):

"1. The pneumatic elevator has no limit in capacity. It is practically independent of everything but its own steam power; its relies on no operation of being fed by men or machines; its flexible suckers reach the grain wherever it is stowed, and the operation of trimming, which, apart from its cost, vexatiously limits the working power of other ship-discharging elevators, is in this case unnecessary. The working cost on shipboard is thus represented by the wages of one man in attendance at each end pipe. . . .

"2. . . . Formerly these two kinds of merchandise had to be dealt with in succession, as the elevator and cranes could not work simultaneously in the same hatchway. But the pneumatic suction pipes occupy only a corner of the

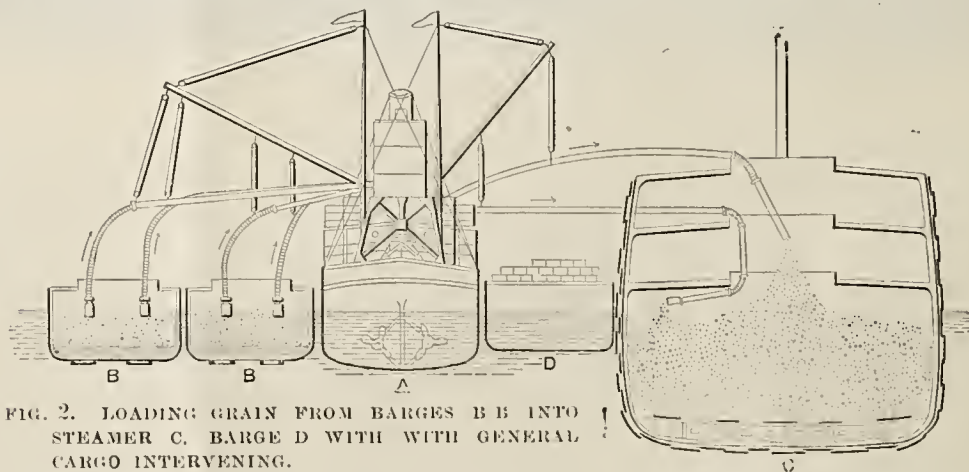


FIG. 2. LOADING GRAIN FROM BARGES BB INTO STEAMER C. BARGE D WITH GENERAL CARGO INTERVENING.

Royal Albert and Millwall Docks in London, and also at Limerick. These machines are all floating elevators, those at the London docks having rectangular hulls 70x26 feet and 13 feet deep. About midships is a 30-foot tower, 20 feet square at the base, supporting a wrought-steel cylinder 14 feet in diameter by 16 feet high, having a double-coned bottom, each cone being fitted with one of the automatic air-locks before mentioned.

"This cylindrical receiver," says the inventor, "is exhausted of air to say five pounds per square inch below the atmosphere. There are external connections for four 6-inch pipes, made up partly of rigid steel tube and partly of flexible armadillo hose. These extend from the receiver to the grain, which is usually in the lower hold of the ship. The pipes often reach a length of 200 feet. They are

hatch, and so allow cranes to be employed in discharging the other cargo while they are continuously sucking out thousands of bushels of grain per hour from sundry storage places in the bowels of the big ship.

"3. The pneumatic elevator commences operation immediately it gets alongside the ship, and proceeds regardless of weather and light until its work is done.

"4. There is an absence of the risks inseparable from ordinary machinery; and in lieu of loss and damage of grain on deck, the grain is aerated and improved by the process of conveying.

"5. Though the initial cost of the steam power is somewhat greater in this than the old-fashioned elevating machinery, the cost of labor is considerably less. . . ."



## PROPOSED LEGISLATION.

Among the various items of proposed legislation we find the following affecting the business of the grain dealer:

California.—A bill requiring all commission merchants to give bond in the sum of \$10,000 as security for the payment of farm products received on sale. A law similar in effect already exists.

Illinois.—The conference committee of the Illinois House and Senate has agreed on a "Corn Propaganda" bill which creates the office of American Maize Commissioner, with a salary of \$2,500 and expenses, whose duty it shall be to "carry into effect a practical demonstration of the value of Indian corn for human food and other purposes among the people of foreign countries, and especially to attend the Paris Exposition of 1900 for the purpose of carrying out the intent and purposes of this act." The commission is authorized to employ assistants and generally to carry out the intent of the act, and the General Assembly of Illinois also "invites the other Indian corn producing states of the United States to unite with the state of Illinois by making appropriations and appointing commissioners, who may cooperate with the commissioner provided for in this act in this effort to enlarge and extend the use of Indian corn."

Kansas.—Senator Crossan, a populist, has introduced a bill providing for grain inspection at ter-

direction of the Warehouse Commissioners. A deposit of \$1 is required to accompany the application for appeal. The full board of six members is required to meet not later than September 15 of each year and designate the grades. These grades cannot be changed until the next annual meeting. The boards are charged with reporting all intemperate, incompetent or indifferent inspectors to the Railroad and Warehouse Commission. Members of the board are required to file a surety bond of \$5,000. Salaries are to be fixed by the Railroad and Warehouse Commission.

A bill requiring commission merchants to execute bonds as security has been amended to provide that, "If such commission merchant receives grain for sale on commission, said bond shall be conditioned that he faithfully account and report to all persons entrusting him with grain for sale on commission, and pay to such persons the proceeds of any consignments of grain received by him, less the commission earned on account of the making of such sale. If he does not receive grain for sale on commission, the bond shall be conditioned to the faithful performance of his duties as such commission merchant."

A bill prescribing a method of grain inspection by the use of plungers. The bill provides that the plunger shall be introduced into different parts of the car until three quarts of wheat or flax shall have been extracted as a sample. This sample must be cleaned

one-fourth of one cent, including ten days' storage; the storage rate for each succeeding ten days to be one-fourth of one cent.

North Dakota.—The bill proposing to tax grain in storage fixes the date for assessment as April. The tax is to be paid by the elevator operator, who in turn has a lien on all grain in the elevator excepting his own.

A bill providing for the payment of a license tax by grain commission men.

Rhode Island.—A bill providing that every lot or parcel of any concentrated commercial feeding stuff, used for feeding domestic animals, sold in the state, shall have affixed in a conspicuous place on the outside a legible printed statement, certifying the number of net pounds of feeding stuffs contained, the name, brand, or trademark under which the article is sold, the name and address of the manufacturer or importer, and a statement of the percentage it contains of crude protein, allowing one per cent of nitrogen to equal six and one-fourth per cent of protein, and of crude fat, both constituents to be determined by the methods adopted at the time by the Association of Official Agricultural Chemists of the United States. This is a P. of H. bill. The term "concentrated commercial feeding stuffs" as used in the act is defined to include linseed meals, cottonseed meals, pea meals, cocoanut meals, gluten meals, gluten feed, maize feeds, starch, feeds, sugar feeds,

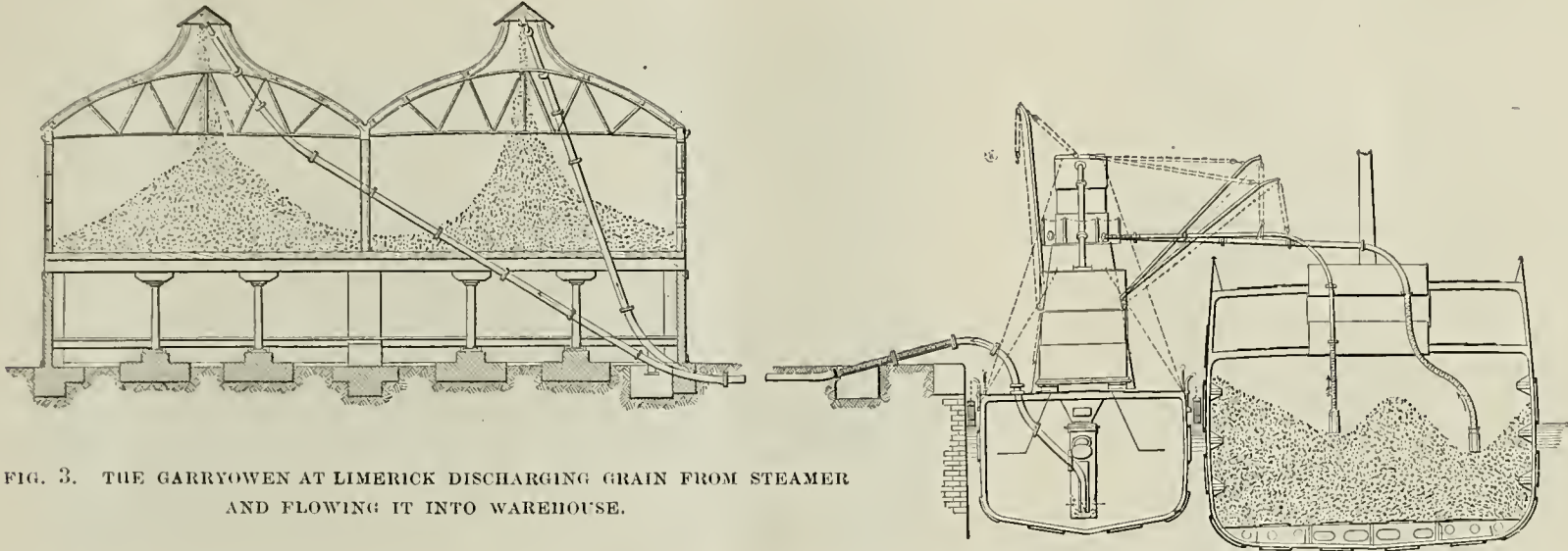


FIG. 3. THE GARRYOWEN AT LIMERICK DISCHARGING GRAIN FROM STEAMER AND FLOWING IT INTO WAREHOUSE.

minal points, the salary of the chief inspector to be \$1,200 per annum. It provides that the offering of a bribe to the inspector shall be declared a felony.

Minnesota.—A bill allowing grain upon which there is a lien for thrashing to be sold upon giving bond.

Also a bill (Olsson) to "prevent gambling on grain." This bill proposes to make it unlawful to sell, contract or mortgage any grain before it has been thrashed so that a sample may be had; that all sales of grain in earload lots at terminals, or to warehouses at any local markets shall be of record in a general office at terminal markets, or at each warehouse office, said record to show the kind, price and quality of grain; and if bought for future delivery the date of delivery shall not be more than thirty days from the date of the contract. Failure to deliver grain sold for future delivery, or buying it in again, is made a misdemeanor, punishable by one year's imprisonment. A similar bill was offered by Plowman, entitled a bill to "protect grain growers against the speculators who manipulate the grain markets at terminals," to appropriate \$500,000 to build a 2,000,000-bushel elevator at Duluth and a 500,000-bushel elevator on the State Fair Grounds. To the first elevator an 18-foot ship canal is to be dug; and at both houses the charges for weighing and inspecting shall be one mill per bushel and for receiving, insuring and delivering not to exceed one-half a cent per bushel, 30 days' storage included.

The grain inspection bill creating a board of appeals passed the lower house on February 22. It provides for a board of six members, making two sets of three members each, to sit respectively at Duluth and at Minneapolis, who shall be under the

before being graded. The sample must be preserved twenty days for use as evidence in case of appeal. If no appeal be taken within twenty days, the samples are to be sold and the proceeds covered into the grain inspection fund. When there is an appeal the inspection may be verified under oath, any departure from the truth to be subject to punishment as in case of perjury.

Missouri.—A bill requiring that when quotations of prices for stocks, bonds, grain, etc., by exchanges and boards of trade are posted, the exact time to a half minute when the offer, price or quotation was actually made upon the market should be recorded, as well as the time to within one-half a minute of the receipt thereof. Penalties are proposed for each infraction of the law, ranging in fines to the extent of \$1,000, and possible imprisonment for one year.

A bill declaring the legal weight of a bale of hay or straw to be 80 pounds.

New York.—Senator Foley's elevator bill provides that the maximum charge for the use of the steam shovel in any New York public elevator shall not exceed 50 cents per 1,000 bushels; that the maximum charge for use of any elevator leg or hoisting apparatus for grain shall not exceed one-half of one cent per bushel; that the storage charge for the first ten days shall not exceed one-eighth of one cent, nor one-tenth of one cent for each succeeding ten days. The bill also provides that all persons handling grain shall be common carriers.

Another bill by Mr. Foley provides for the appropriation of \$500,000 to be used for erecting three elevators at Buffalo, and three at New York, to be operated by the state, the total charge for handling grain through said houses not to exceed

dried brewer's grains, malt sprouts, hominy feeds, cerealine feeds, rice meals, oat feeds, corn and oat chop, corn and oat feeds, ground beef or fish scraps, mixed feeds, provenders and all materials of a similar nature, not, however, including hays and straws, the whole seeds nor the unmixed meals made directly from the seed of wheat, rye, barley, oats, Indian corn, buckwheat or broomcorn, nor include wheat, rye and buckwheat bran or middlings unmixed with other substances and sold separately as distinct articles of commerce.

Wisconsin.—Two bills have been offered affecting elevators and warehouses. One bill is to authorize the establishment of public warehouses. The other provides that when warehouses, elevators or mills having a capacity of not less than 5,000 bushels are located on the right of way of any railroad or adjacent to such right of way, the building of a side or stub track may be demanded.

## RUSSIAN SPELTZ.

Frank Sherwin of Brookings, S. D., successfully grew the Russian Speltz last season on three acres, which yielded 40 bushels per acre. He used a drill and thinks five pecks per acre are abundance of seed when drilled or six pecks sown broadcast which he believes would give a greater yield. Speltz is said to grow better than wheat, and has a very stiff, fine straw with a bearded head, while the kernel is inclosed in a husk like wheat. The husk is very tenacious and as the thrasher does not remove it when it is ground for horses, cattle and sheep, the husk lightens the feed and makes a well balanced ration more like oats. It weighs about 50 pounds to the bushel and is said to yield in the old country about 60 bushels per acre.



## BETTER CARS FOR TRANSPORTATION OF GRAIN.

[A paper read before the Kansas Grain Dealers' Association's meeting at Topeka, January 10 and 11, 1899, by H. L. Strong of Coffeyville, Kan.]

The subject of "Better Cars for Transportation of Grain" is certainly a very important one, and should receive the attention of every grain dealer, buyer, shipper and receiver. The value of grain lost in transit from old, leaky, worn-out cars in the past ten years would amount to enough to buy new cars necessary to equip an average line of railroad. It would build a 10,000-bushel elevator at every station on this railroad. It would pay a good salary to maintain a competent car repairer for every car in use the year round. It would pay all expenses of a trip to Paris to the exposition in 1900 for every grain dealer in the United States. It would pave the right of way of the entire length of railroad with brick or boards, so all grain leaking out could be swept up and saved. It would line with iron or steel every car in use on all roads. Many other calculations could be made for good uses to which the value of this lost grain could be put, but it is unnecessary to go further. To sum it all up, this grain goes to waste and is absolutely lost to everybody and so is all good it might do. Think of the poor people it would feed if it could all be properly saved and sold at market value.

Who stands the loss of all this grain? The railroads? No; positively, no. If they were compelled to stand even one-half of the losses of grain leaking out of these poor old scrap piles called cars, for one season only, the problem of better cars would be solved in short order. They would build new and up-to-date cars which would carry grain without any loss whatever. A grain dealer could then safely sell his grain on destination weights and figure for certain that his weights would hold out all right at destination. It would save an endless amount of correspondence regarding these shortages at destination and would also save a lot of clerical work to the railroads themselves in making up detailed reports of sealing the cars, handling them over different divisions and noting the conditions of cars, etc., in which this grain was transported and reported short in weight at destination. Better cars would also save many wrecks caused by the falling to pieces of some of the old, worn-out cars which in many cases cause loss of life besides loss of considerable grain, which in this case must be paid for by the railroad.

While in some cases shortages have been traced to dishonest elevator people who steal our grain, it has been clearly demonstrated by the detailed report of the checkmen of the Kansas Grain Dealers' Check Weight Bureau in Kansas City that a large per cent of the shortages are directly traceable to poor, rickety cars in which the grain was transported. The grain arrives leaking at cracks and joints on all sides and ends. The Bureau reports that a great many cars are utterly unfit for the transportation of grain and should be condemned and consigned to the scrap pile. We find by comparison of reports that some roads have much better cars than others. I will not, however, here mention the names of these roads having the best cars; I do not consider any flattery due any of them. What we want is better cars to save this extravagant and needless waste of grain in transit; and now for the best way to obtain the desired results.

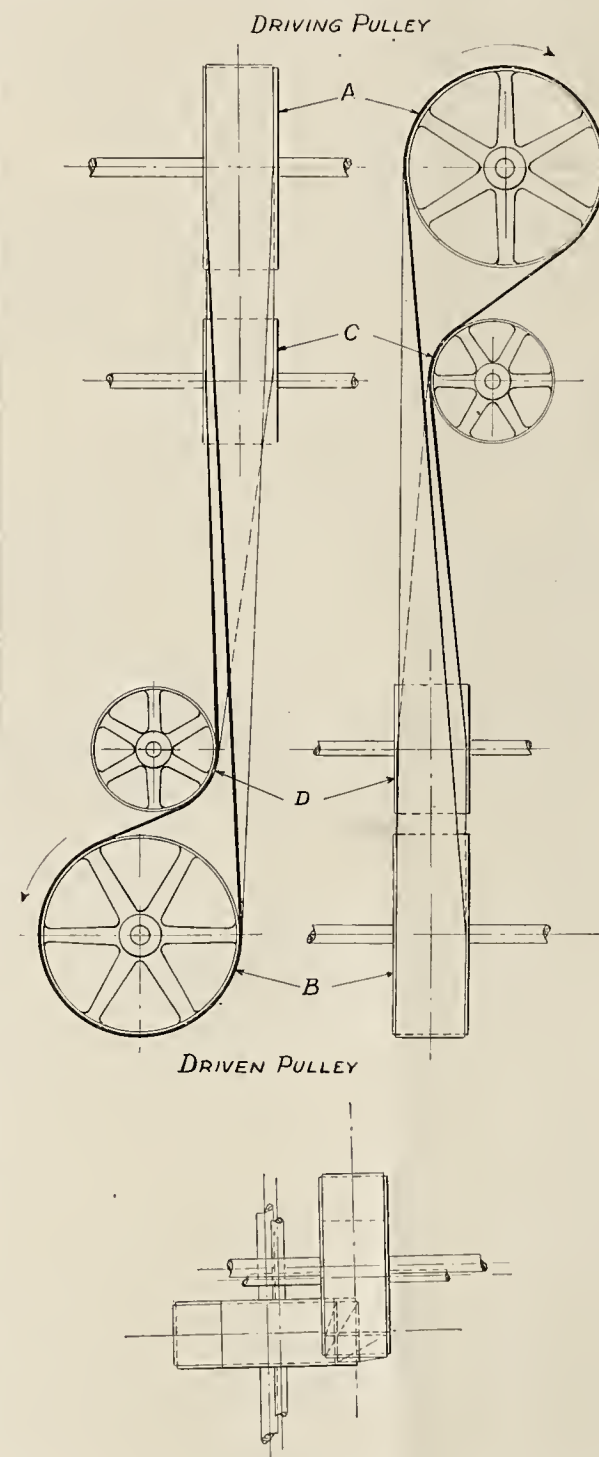
It is possible that some good may be accomplished by a committee visiting the heads of the different Kansas railroads and showing them wherein there is considerable extra loss and expense to themselves and a large loss to the shippers, and that unless they take necessary steps to furnish better cars for the shipper the grain men will be obliged to take some other steps for protection against this loss. Possibly the best solution of this problem is the long-talked-of legislation to compel the railroads to issue a clean bill of lading for the receipt of a certain quantity of grain and make them deliver the same amount of grain at destination. If this could be accomplished, there is no doubt at all but it would solve the problem; because the railroads would then be obliged to

furnish better cars for their own protection against loss. I will suggest that a committee of three be appointed by the chairman of this meeting to look into this matter fully and adopt some plan which may be put into execution at once with a view to securing better cars for the transportation of grain. And as soon as the plan is decided upon, the committee should notify the secretary of the Kansas Grain Dealers' Association, who may in turn notify all country dealers and others interested, so that all may have a chance, if possible, to push the good work along.

## QUARTER-TWIST BELT.

BY JOHN S. METCALF.

A quarter-twist belt can be made to run as satisfactorily as a straight, open belt and better than a cross belt by interposing two idlers on the slack



side of the belt, as shown in the illustration. If the idlers are correctly located, the tight or driving side of the belt will be simply twisted and pulled slightly out of line and the slack side will be twisted and only pulled out of line half the face of the pulley.

The idler next to the driven pulley may be omitted where narrow belts or small pulleys are used, or where the shafts are not too close to each other.

The face of pulley A should be in line with the edge of pulley B, and the face of pulley B should be in line with the center of pulley A. The face of idler D should be in line with the edge of idler C, and the face of C in line with the center of D.

The writer has been putting in quarter-twist belts, as illustrated, for a good many years, and finds that they are in every way as satisfactory as straight belts, and that they will transmit more

power on account of the increased wrap of the belt on the pulley.

## RATES IN MINNESOTA.

The Railroad Commissioners of Minnesota on February 23 gave a hearing to representatives of the grain shippers, mainly state senators, and of the railroads upon the complaint of unfair grain rates. As usual in all such discussions, the details of the investigation were too technical for any but the expert tariff makers to understand. The senators floundered about almost hopelessly, uncertain where they were at, save that they contended the rates were too high and were unequal as between towns. After some three hours of talk Commissioner Ringdal summed up the situation under three divisions, which, he said, he understood were the things which the legislators seemed to be asking for:

First, was a general reduction of flax and wheat rates in their section of the state, of at least one cent per hundred.

Second, a readjustment of the rates between adjacent towns where they were out of line.

Third, to bring the flax and wheat rates together where there is too great a discrepancy between them.

This summary meeting with the approval of the senators present, it was decided to leave these questions to the railroads to be considered at a meeting of their own; after which a report by them will be made to the Commission of their decision, on March 15, through J. T. Clark, of the Omaha road.

## FORBIDS MEMBERSHIP IN ASSOCIATIONS.

The Kansas City Board of Trade, at a recent meeting, adopted the following amendment to the rules relative to membership of its members in other associations:

"On and after March 1, 1899, no member of this Association shall become or remain a member of, or have or retain in his employ on salary or commission a member of, or contribute in any manner to the support of any voluntary association of persons, which persons are engaged in the purchase and sale of any grain or other articles, the traffic in which is a subject of regulation by this Board of Trade; provided, that this rule shall not be construed to prohibit membership in any board of trade or exchange of any other city."

In explanation of this apparently arbitrary action, the Board of Trade, over the signature of Secretary E. D. Bigelow, has issued the following circular, bearing date February 28, 1899, which has been sent to members of the grain dealers' associations in the states contiguous to Kansas City:

"In order to avoid any misunderstanding as to the motives actuating the Board of Trade in adopting its recent rule relative to membership of its members in other associations, the Board desires making this statement:

"To secure the best interests of the Board of Trade and its members it will be acknowledged by all fair-minded people to be its first and rightful duty, and as to the proper methods to that end we alone can be the judge.

"Some time since a number of our members united with several grain dealers' associations with the hope of benefit on both bodies.

"We wish to make it clear to you that this action was not taken from any feeling of antipathy or ill will toward any association, but as a measure in protection of the best interests of the Board of Trade.

"The desirability of grain dealers to associate for any lawful purpose we believe in, and with such associations we desire to be in the most cordial relations. In all their proper efforts to rectify evils and for the promotion of better methods, this Board will most heartily and effectively coöperate. The standing and usefulness of any association will depend to a very great extent upon the personal character and reputation of those charged with the immediate management of its affairs, and the



degree to which they command the confidence and respect of the public.

"It is believed by our Board that for each association to stand alone and then work side by side, the object sought to be attained can be more satisfactorily effected than by an amalgamation of memberships. In all good work we are with you with our best efforts.

"We are in full sympathy with the cheek weight system established by the Kansas City Grain Dealers' Association, and do not know of any of our members who do not wish to see it continued."

### THE STAR ELEVATOR, FREMONT, OHIO.

In some respects Ohio is the best balanced commonwealth in the Union. Full of cities and towns of ample size, she is dominated by no great metropolis. Her industrial activity runs neither to agriculture, mining or manufacturing, but includes all in generous proportions. In each respect Ohio may be taken as a representative state. Last year, for instance, she was second in the production of winter wheat, 42,000,000 bushels being placed to her credit. Of corn, Ohio produced 102,000,000 bushels, the production per acre being nearly or quite the largest of any state in the country.

Fremont, a busy city of 8,000 people and better known to the world at large than most places of

### OKLAHOMA GRAIN DEALERS.

The annual meeting of the Grain Dealers' Association of Oklahoma and Indian Territory met at Oklahoma City on February 22, 1899, pursuant to the regular call, and was called to order by Vice-President E. D. Humphrey of El Reno, Okla., President Coyle being absent. The secretary, G. F. Johnson, also being absent, the vice-president appointed J. C. Robb of Kingfisher as temporary secretary.

The vice-president then announced that this was the regular annual session of the Oklahoma and Indian Territory Grain Dealers' Association, and announced as the regular order of business the election of officers.

Before the election of officers, the roll was called, and the following members found to be present: El Reno Mill and Elevator Company, of El Reno; A. T. Haines of Kingfisher; W. T. Havard of Hennessey; W. R. Binkley of Kingfisher; August Claire of Geary; E. L. Donahue, Bro. & Co., of Ponca City; Wichita Mill and Elevator Company of Wichita; Purcell Elevator Company of Purcell; Perry Milling Company of Perry; Norman Milling and Grain Company of Norman; Eagle Mills of Edmond; Gramer & Grant of Oklahoma City; Coyle & Jones of Perry; Frank Mach of Oklahoma City; J. C. Robb & Co. of Kingfisher; Oklahoma Mill Company of Kingfisher; Geo. Masters of Perry; Farmers' Mill & Elevator Company of North Enid; and Oklahoma Grain & Live

to return. After a lengthy discussion, and some controversy, between Mr. Stout, Mr. Havard and others, it was agreed, and voted upon as a substitute, that this motion be laid upon the table; and it was the sense of the meeting that matters of this kind should be left to the board of directors for adjustment.

The annual dues were, upon motion, increased to \$10 per annum, payable quarterly in advance, in equal payments.

Upon motion, E. J. Smiley, secretary of the Kansas Association, was given a vote of thanks, and the secretary was ordered to draw an order for \$25 to pay his expenses of attendance at our meeting.

Secretary J. C. Robb introduced the following resolution:

"Whereas, We, the members of the Oklahoma Grain Dealers' Association, are not satisfied with the method of the inspection department at the port of Galveston; and

"Whereas, Said department does not preserve samples of each car; and

"Whereas, An appeal from the inspection department cannot be had except at most unreasonable and exorbitant charge; therefore, be it

"Resolved, That the Board of Trade of Galveston and the Chamber of Commerce be and are hereby requested to take action to remedy the methods now in existence."

The resolution was adopted and the secretary was instructed to send copies of the same to the secretary of the Board of Trade at Galveston and the secretary of the Chamber of Commerce at Galveston.

J. C. Robb, secretary, introduced the following resolution:

"Whereas, We learn that a resolution is now pending before the Kansas City Board of Trade, which seeks to sever the members of said Board of Trade from membership in our Association; and

"Whereas, We believe said resolution is a stroke at the life of our said Association; therefore, be it

"Resolved, That we are unalterably opposed to such resolution; and hereby pledge ourselves to withhold all our shipments from members of said Board of Trade voting for such resolution."

The resolution was, on motion, adopted, and the secretary was instructed to send copies to the members of the Board of Trade of Kansas City at once.

At this time a lengthy discussion was entered into concerning local differences between members of the Association; and the secretary was authorized to proceed to any local point upon the request of the members interested and attempt to adjust their differences; and in case they failed to agree and abide by his decision, he is to report in writing all the facts in the case, together with his findings, to the board of directors, who shall then take up the matter and pass upon it finally.

The secretary was also instructed that where members of the Association have differences with receivers, upon the request of the board he shall take up the matter officially and attempt to make an adjustment.

On motion, adjourned, subject to call.

J. C. ROBB, Secretary.

### NEW TANK ELEVATOR IN CHICAGO.

The Wm. Graver Tank Works of Chicago has just finished the erection of a tank elevator of 100,000 bushels' capacity for R. H. Truitt. The plant is located on the inner Belt Line at Eighty-fifth Street, Chicago, and consists of three steel tanks 30 feet each in diameter and 50 feet high. The tanks stand at the three corners of a triangle, with the machinery located in a building erected between the tanks. The grain will be elevated from the sink to a height above the tops of the tanks, into which it is spouted. The power to be used is a 10-horse power gasoline engine.

Ventura and Santa Barbara counties of California have planted an increased acreage to field beans. Old stocks of beans are exhausted in that producing section.



THE STAR ELEVATOR AT FREMONT, OHIO.

its size, is a good type of the state at large, with its diversified business interests. Among these is the Star Elevator, owned by Messrs. Gottron & Cook, a cut of which is given on this page. The elevator has a capacity of 35,000 bushels, and is provided with all necessary appliances for the expeditious conduct of business. It is located on the tracks of the Lake Shore & Michigan Southern Railroad, and has connections with the Wheeling & Lake Erie, and the Lake Erie & Western Railways. Fremont is in one of the best winter wheat districts in the country, and the Star Elevator does a good business. The members of the firm are John F. Gottron and H. M. Cook, who, in addition to their grain and seed business, handle coal, cement, wool, hides, etc.

### NEW LINSEED PROJECTS.

Alex. Euston of St. Louis was formerly president of the old linseed oil company, but when the new combination was formed he did not go into it. He has not published his reasons therefor; but he apparently has faith in the possibilities of a linseed oil business outside of the trust; for he has announced that he has bought a plat of ground on the north branch of Chicago River, near Blackhawk Street, and is having plans made for a linseed mill of 3,000 barrels' daily capacity, to be operated by employees of the late trust.

It is rumored at Minneapolis also that one, and possibly two, linseed mills will be established in that city, while manufacturers of linseed crushing machinery claim that there is more inquiry for that class of machinery now than for several years past.

Stock Company of Oklahoma City. The vice-president announced a quorum present.

E. J. Smiley, secretary of the Kansas Grain Dealers' Association, being present, the vice-president invited him to address the meeting. He gave a very interesting address, outlining the results of the efforts of the Kansas Association.

F. D. Stephens of the Wichita Elevator Company made a motion that we proceed to the election of officers. The motion was seconded, and upon the call for ayes and noes it was declared to be carried.

Mr. E. L. Donahue of Ponca City was nominated for president. Upon motion, the rules were suspended and Mr. Donahue was elected by acclamation.

Mr. E. D. Humphrey was then re-nominated for vice-president, and upon motion the rules were suspended and Mr. Humphrey was declared elected by acclamation.

Mr. E. J. Coyle of Perry was renominated for treasurer, and upon motion the rules were suspended and he was elected by acclamation.

Mr. J. C. Robb of Kingfisher was nominated for secretary, and upon motion the rules were suspended and he was declared elected by acclamation.

For the board of directors, W. R. Binkley of Kingfisher, L. F. Kramer of Oklahoma City and S. M. Williams of Purcell were nominated, and upon motion the rules were suspended and they were declared elected by acclamation.

Mr. Stout of the Farmers' Mill & Elevator Company, of North Enid, made a motion that where members of this Association are loading wheat by scoop-shovels and abandon the business at the station at which they are loading, they forfeit their right



**THE EVIL PROPHET.**

He's a bother to creation—  
For troubles ever billed;  
His eternal tribulation  
Is "The  
Wheat  
Crop's  
Killed!"

Though the sunshine warms the nation,  
Yet his voice with grief is filled;  
It's an awful situation,  
For "The  
Wheat  
Crop's  
Killed!"

He's at every town and station,  
And when every voice is stilled,  
Hark! the tintinnabulation  
Of "The  
Wheat  
Crop's  
Killed!"

—With acknowledgments to Frank L. Stanton in Atlanta Constitution.

**COMMUNICATED**

[We invite correspondence from everyone in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

**ONE-HALF CENT MARGIN ON OATS.**

*Editor American Elevator and Grain Trade:*—We hear of no complaints from farmers around here. There is not much wheat raised in this territory, the grain being mostly oats, barley and seeds. We have to buy oats, as a rule, on one-half cent margin.

Yours truly, JOHN CRONAN & CO.  
Rose Creek, Minn.

**SOME UNSUCCESSFUL FARMERS' ELEVATORS.**

*Editor American Elevator and Grain Trade:*—Concerning the building of farmers' elevators in this section, will say that there is more or less dissatisfaction, but no movement as yet. Such houses were tried at Wakonda and at Beresford, but they both broke up as they could not get along.

Yours respectfully,  
G. NORGRÉN & CO.  
Centerville, S. D.

**NEW WISCONSIN ELEVATORS.**

*Editor American Elevator and Grain Trade:*—We wish to correct an item which we saw in your last issue about the remodeling of the Duvall Elevator here. In addition to this a new elevator will be built with a total capacity of 125,000 bushels.

The Kewanee Grain Co. will also build a grain warehouse at Casco, Wis., having 20,000 bushels' capacity.

Yours truly, KEWAUNEE GRAIN CO.  
Kewaunee, Wis.

**LET THE FARMERS TRY.**

*Editor American Elevator and Grain Trade:*—Farmers in this section have no reason to complain, as they receive all, and sometimes more, for their grain than they could realize by shipping it. The only way I can see for the dealers to act is to let them build elevators and handle grain. By doing so they will find that it is not all clear gain, and at the end of the year the balance will be on the wrong side of the ledger.

Yours truly, L. SCHNELL.  
St. Charles, Minn.

**BUSINESS MEN COMBINE TO RAISE GRAIN PRICES.**

*Editor American Elevator and Grain Trade:*—No movement toward establishing a line of farmers' elevators has materialized in this locality. I do not know of a farmers' elevator within a radius of 50 miles. Will say, however, that our town had some trouble with low markets this season, and as a matter of protection to the business interests of the town, the business men to the number of 28 formed an association for buying grain and the result was that we were able to pay from 2 to 5 cents more per bushel for grain than any town in the vicinity. I do think that if the elevator men do not pay a

little more for grain, there will be some movement by business men or farmers for better markets.

Yours respectfully, J. B. CONLEY.  
Lake Mills, Iowa.

**PURCHASED AN ELEVATOR.**

*Editor American Elevator and Grain Trade:*—I have purchased Mr. Cal. Baum's elevator here, and seeing a copy of the "American Elevator and Grain Trade," addressed to him, I send you herewith \$1 for a year's subscription to same. Your journal covers the whole country and seems to have lots of information that makes it interesting and useful to everyone in the grain trade.

Yours truly, F. C. DAVIS.  
Swayzee, Ind.

**A BELATED ITEM.**

*Editor American Elevator and Grain Trade:*—I see in the February number of the "American Elevator and Grain Trade" a news item which says that the erection of an elevator at Paw Paw, Mich., is being talked of. Will say that the elevator here was completed and in running order on the first of January. The capacity is 10,000 bushels and power is furnished by a gasoline engine.

Yours truly, ELI WISE.  
Paw Paw, Mich.

**PLANS FOR A FINE EASTERN ELEVATOR.**

*Editor American Elevator and Grain Trade:*—We have not begun the building of our new elevator yet, but plans and full particulars are in the hands of the Macdonald Engineering Company of Chicago. The elevator will be connected with our dock, 350 feet distant, by a Harrison Chain Conveyor, working a marine leg delivering bulk grain direct from vessel to our new elevator on the railroad. We expect to have the finest equipped elevator in New England.

Yours truly, MACKENZIE & WINSLOW.  
Fall River, Mass.

**COMPETITION SHARP: MARGINS SMALL.**

*Editor American Elevator and Grain Trade:*—About a month ago circulars were sent out from Minneapolis or St. Paul to the farmers and independent buyers in Northwestern Iowa and South Dakota. Very little attention was paid to the matter at the time and it is almost forgotten now. The fact is, the farmers have no "kick coming." Nearly every station has from one to three independent buyers besides the line men. Competition is very sharp and margins very small.

Yours respectfully, F. E. DE CELLE.  
Hull, Iowa.

**IOWA FARMERS HAVE NO COMPLAINTS.**

*Editor American Elevator and Grain Trade:*—I have not heard anything of the farmers making a move to build an elevator in this part of the country, and I think the farmers have no grievances whatever in regard to marketing their grain. Prices are very good, compared with the two previous years, and I have not heard a complaint this season in regard to prices.

I think there is no movement toward the farmers building an elevator, at least within 40 or 50 miles of this place. Beyond that distance I am unable to say what they are doing, but I have heard of nothing of the kind.

Yours truly, J. A. GRAY.  
Schaller, Iowa.

**DEATH OF J. K. CAMPBELL.**

*Editor American Elevator and Grain Trade:*—J. K. Campbell, a prominent grain dealer at West Milton, Ohio, died at the home of his daughter in Lewisburg, Ohio, on Feb. 10, after an illness of 23 hours, of la grippe and pneumonia.

Mr. Campbell was born in Montgomery Co., Ohio, March 8, 1836. At the age of 20 years he commenced life by teaching school and later served as a traveling salesman, but for more than 20 years he has operated a line of elevators along the C. H. & D., the Big Four and the Cincinnati & Northern railroads. At the time of his death he was senior member of the following firms: J. K. Campbell & Son, West Milton, Ohio; Campbell, Younce & Campbell, Kessler Station, Ohio, and Campbell & Pierce, Lewisburg, Ohio. He had come over to make his annual settlement with the Lewisburg firm when he

was suddenly taken sick and died the following day as stated above. Mr. Campbell was prominent in public life in his community and had been an active church member for 40 years.

Yours truly, CHAS. T. PIERCE.  
Lewisburg, Ohio.

**A SIGN OF CONTENTMENT.**

*Editor American Elevator and Grain Trade:*—I do not take much stock in the statement in Mr. Donnelley's paper, as I think it mostly wind. I think the farmers in this vicinity are pretty well satisfied with the men who buy their grain here—the H. J. O'Neill Grain Co. of Chicago.

There has been but very little grain shipped from here this season by farmers, and this fact goes to show that the farmers are getting about all their grain is worth.

Yours truly, M. J. MALDOON.  
Hammond, Minn.

**GOOD PROSPECT FOR MORE ELEVATORS IN MANITOBA.**

*Editor American Elevator and Grain Trade:*—This town of Elgin is situated on a new branch of the Northern Pacific in Manitoba, and the prospects are that the road will be extended this coming summer, and expect that several more elevators will be built.

I have seen several copies of your paper, and, as I am in the elevator business, would like to take it. It is a help to a man in this business in the matter of keeping him posted on latest improvements and machinery.

Truly yours, J. A. GLENDINNING.  
Elgin, Manitoba.

**FARMERS' ELEVATORS ARE BADLY MANAGED.**

*Editor American Elevator and Grain Trade:*—We do not know of any farmers' elevators to be erected this season in this vicinity. Those operated here during late years nearly all proved a failure, which was no doubt due to bad management.

We think that some years the farmers have grievances in marketing their grain, especially at stations where the receipts are light and the buyers many. At some of these stations the buyers will combine and agree on prices in order to make it profitable for all of them.

Yours truly, KLINGLER & LYNCH.  
Slayton, Minn.

**NO GENERAL FARMERS' ELEVATOR MOVEMENT.**

*Editor American Elevator and Grain Trade:*—So far no steps have been taken to build a farmers' elevator at this place, but at Castlewood and Dempster. I understand there is talk of it. White, S. D., has two farmers' elevators. One seems to be doing a good business, while the other has made a failure. The other day one of its stockholders offered the writer his interest in it for 50 cents on the dollar.

I do not think the farmers have grievances against the grain trade to warrant them in the general building of elevators now, but they may take the matter up later.

Yours truly, A. E. BUNDAY.  
Bruce, S. D.

**WEIGHING ON CITY SCALES.**

*Editor American Elevator and Grain Trade:*—I have heard nothing regarding the erection of farmers' elevators in this part of the country.

The town put in a wagon scale here the first of January and passed an ordinance compelling all persons selling over 500 pounds of grain or coal to weigh same on this scale, and the seller to pay 5 cents for weighing. This will satisfy them for a while, I think, but if someone should talk up the building of a farmers' elevator it might be that he could get enough suckers to do something of the kind.

I don't think the farmers here have the least excuse for making complaint, as the dealers have been handling the grain on 1/2 to 1 cent margin and even less. Still, there may be a few who are not satisfied. There always will be. I don't know what the grain dealers should do in case of the Grain Growers' Association trying to organize a line of farmers' ele-



vators. For my part, if the farmers want to go into the grain business in this town, I will sell out to them and quit, or will go somewhere else.

Yours, W. B. BOOHER.  
Danbury, Iowa.

#### FARMERS COULD NOT HANDLE GRAIN CHEAPER.

*Editor American Elevator and Grain Trade:*—There is no movement of the Grain Growers' Association to build farmers' elevators in this section of the country and in our opinion such a movement would prove a failure.

We are not acquainted with the conditions of the grain trade in Minnesota and the Dakotas, but so far as Iowa is concerned, there certainly is no reason why farmers should build elevators at each station, as grain is handled on small margins by present methods and we doubt very much if farmers could handle it cheaper.

Respectfully yours, O. P. BEALE & CO.  
Tama, Iowa.

#### "JUST TO HELP THE TOWN."

*Editor American Elevator and Grain Trade:*—Regarding the building of farmers' elevators as advocated by the Grain Growers' Association of Minnesota, it is my opinion that nothing will be done. Farmers as a rule are satisfied with the local markets, and when a farmer desires to ship his grain the railway company will promptly furnish him cars and the regular dealer can wait.

Nearly all stations now have track buyers or storekeepers who can handle farmers' grain for nothing, just to help the town. Consequently there will be no building done during existing conditions.

Yours truly, W. H. OLDS.  
Tulare, S. D.

#### NO UNUSUAL AGITATION AMONG NORTH-WESTERN FARMERS.

*Editor American Elevator and Grain Trade:*—The alleged movement toward building a line of farmers' elevators in the Northwest has made no headway in our locality. Do not think there is a general movement in this direction, for certainly the farmers of the Northwest have no grievances in the marketing of their grain to warrant a movement toward building their own elevators. We do not believe such a movement exists to any greater extent than is usual every year.

In a very large majority of cases these farmers' houses, after being run for one season at a loss, are gladly disposed of to some line elevator company.

Yours very truly, C. M. AMSDEN.  
Minneapolis, Minn.

#### WILL NOT PLACE MACHINERY AT PRESENT.

*Editor American Elevator and Grain Trade:*—Referring to our elevator here, while we have our building and dumps completed, we have never put in the machinery, owing to a partial failure in the corn crop in this vicinity. Will venture to say that there will not be a carload of corn of the 1898 crop shipped from this point. Of course, we have some corn, but we also have several large cattle feeders in this territory who consume a large quantity of corn. I am feeding some myself.

Seeing but little prospect of running the machinery before another crop is made, have decided not to put it in until there is prospect of running it profitably.

Yours truly, F. D. VORIS.  
Neoga, Ill.

#### SCOOP-SHOVEL FARMERS THE WORST COMPETITION.

*Editor American Elevator and Grain Trade:*—It is safe to say that no farmers' elevators will be built in this section of the state. Very few of the farmers belong to the Grain Growers' Association. This elevator used to be a farmers' house, but they sold out to the company I represent.

Considerable dissatisfaction was expressed last fall, but it was directed mainly against Minnesota inspection, as they, of course, understand that we have to keep in line with terminal grades.

I do not see how farmers' elevators would help them any as they can load their grain into cars and ship it without an elevator. Considerable grain is

shipped this way every year and it is the worst kind of competition we have.

Three-fourths of the elevators in North Dakota are owned by elevator companies having their headquarters in Minneapolis.

Yours truly, B. R. JONES.  
Lidgerwood, N. D.

#### WEIGHER EMPLOYED BY THE CITY.

*Editor American Elevator and Grain Trade:*—Regarding the movement by the Grain Growers' Association to establish farmers' elevators, will say that we know of no such movement in this vicinity, but presume such a movement would flourish best in strong populist sections.

Don't know of any grievances the farmers have, but we deem it advisable to have an impartial weigher employed by the city to weigh all the grain that comes to market.

If farmers everywhere have had the same experience shipping their own grain as those around Akron, they are, or should be, content to let the regular dealers handle it for them.

Yours very truly,  
THE FIELDS & SLAUGHTER CO.  
Akron, Iowa.

#### NO CAUSE FOR ALARM.

*Editor American Elevator and Grain Trade:*—We have heard of no move in our section to establish farmers' elevators. The one put up here 10 years ago is practically out of their hands at this time. At the time the farmers owned their own house, we think any one of the other houses handled more grain, and it was as easy to buy a load of grain from a farmer who held stock in the farmers' house as from one not interested. The farmers who own stock in an elevator expect it to pay good interest on their money, and that is what every man in the grain business wants—just a fair profit.

We cannot see any cause for alarm in a few farmers' elevators going up, to be sold cheap in a year or two to some individual buyers.

Respectfully, ARMOUR ROLLER MILLS.  
Armour, S. D.

#### AN ANNUAL OCCURRENCE.

*Editor American Elevator and Grain Trade:*—So far nothing has been done by the farmers in the way of building an elevator here. They tried it several years ago and the older ones have a very distinct recollection of the outcome, which was far more grievous than their relations with the old dealers.

They are talking of doing great things, in a general way, but I have found by experience that this is the season of the year for them to begin to rant and tear (like cats, they begin to howl in early spring). As soon as they can go to work they will quiet down pretty well for the rest of the season. My experience in dealing with them is that it is best to keep right on sawing wood and crowd them at every corner. But they are not as bad as the scoop-shoveler, as he comes and stays a while and then goes to greener pastures, and soon another comes along, and he always finds plenty of sore-heads to do business with.

Yours truly, H. A. BAXTER.  
New Hartford, Iowa.

#### NO EXCUSE FOR LINE OF FARMERS' ELEVATORS.

*Editor American Elevator and Grain Trade:*—I have never heard of the movement you speak of, and certainly no excuse exists here for any such movement. Local buyers pay all that the market will justify all the time, and the only fellow that has any cinch that I know of is the fellow with the big elevator at Chicago, who, by devices of billing that defy the intelligence of an expert, buys the bulk of the grain in the country, and by the manipulation of so-called "export" or other rates, succeeds in reaching the seaboard on his own terms.

If a farmer thinks he is discriminated against by his local grain buyer, just let him tackle a track buyer, with a carload or two of grain that misses the contract grade, and see how he will "get it in the neck." Let him ship a few cars of genuine 1897 corn, and have a track buyer inspect it "new" corn, and see where he is at! No greater swindle has

been played on the country buyer than the practice of calling our new corn soft, or calling our old corn new, while it is bone dry, and will export equal to 1897 corn.

Truly yours, F. D. BABCOCK.  
Ida Grove, Iowa.

#### NO INDUCEMENTS FOR FARMERS TO SHIP.

*Editor American Elevator and Grain Trade:*—In regard to farmers building elevators, will say that here, and as far as my knowledge goes, there is no such movement on foot, nor do I think it likely that there will be. Competition between buyers is such that it keeps the price where there is no inducement for the farmers to build and ship for themselves.

When elevator men buy on a margin of 1 to 3 cents per bushel, as we do here, there is not likely to be much complaint, except when the dealers of a neighboring town are on the war path and donating their time and money to the farmers.

There have been but two cars of wheat and one car of rye loaded here this season by farmers, and one of those was purchased by the buyers.

Truly yours, F. L. WHEELER.  
Scotland, S. D.

#### NO GRAIN GROWERS' ASSOCIATION IN SOUTH DAKOTA.

*Editor American Elevator and Grain Trade:*—I do not know of a Grain Growers' Association being organized anywhere in this part of South Dakota, although there are several farmers' co-operative elevators. One at Hetland, one at Volga, one at Brookings and one at Estelline, are the nearest to this place, there being none here at Arlington.

No, I do not think the farmers of the Northwest have any undue grievances in the marketing of their grain. However, they think the elevator companies are making too large a margin, so they build elevators to handle their own grain. These houses are very disastrous to other grain men, but I do not know how the problem should be handled by the grain men to induce the farmers not to build elevators.

Yours very truly, S. L. BUNDAY.  
Arlington, S. D.

#### CLOSED LINE HOUSES CONDUCTIVE TO FARMERS' SHIPMENTS.

*Editor American Elevator and Grain Trade:*—Regarding the building of farmers' elevators throughout the Northwest, will say that this movement has made no particular advance to my knowledge, although farmers' elevators do exist to a certain extent throughout the whole country.

I do not think the farmers of the Northwest have grievances in the marketing of their grain that would warrant such a movement, although in some localities they may think they have.

I think the grain companies could help stay this movement a good deal by endeavoring to keep their houses open as much as possible, and not close them for three or four months out of each year. Closed houses cultivate the habit of farmers shipping, and that leads to building farmers' elevators.

Yours respectfully, D. W. BUNDAY.  
Brookings, S. D.

#### FARMERS' ELEVATOR EXPERIENCES IMPROVE RELATIONS.

*Editor American Elevator and Grain Trade:*—There is nothing in the report of the forming of a line of farmers' elevators so far as this vicinity is concerned. The farmers built elevators at three different points in Lincoln county ten years ago, and they have proved failures. There is only one in operation at the present time and it does not pay its way. I am buying grain on the same market as this house and am well satisfied with the business done.

The farmers have just cause for complaint in some sections of the state where companies and line houses have a monopoly of the business and collect usurious margins on grain.

I think it quite probable that there will be some movement toward operating farmers' houses the coming season, but I do not consider it an injury to the honest grain dealers, but a benefit in the long run. It seems impossible for a farmers' company to conduct business on a paying basis, so, after a trial at handling grain themselves, they seem to



look at a grain dealer in a better light. The writer farmed for 20 years and has been in the grain business for 5 years, and he knows just how the farmer feels toward the grain buyer.

Yours respectfully, WM. BRADSHAW.  
Worthing, S. D.

#### WILL BUILD AN ELEVATOR.

*Editor American Elevator and Grain Trade:*—I will begin the building of an elevator of 5,000 bushels' capacity at Prairie Home, Neb., as soon as spring opens. It will be erected on the site of the Chas. Counselman & Co. elevator, which burned last November at the same time the Rock Island depot was burned. The work will be pushed forward as rapidly as possible, so that I can have it in operation by June 1.

Yours truly, S. T. JAMES.  
Alvo, Cass Co., Neb.

#### FARMERS' ELEVATOR MOVEMENT WILL DIE OUT.

*Editor American Elevator and Grain Trade:*—In regard to movement to establish a line of farmers' elevators, will say that it has not made much, if any, headway in these parts. Do not think the movement will become general.

As to the grievances of farmers in marketing their grain, think they are more imaginary than real. There are some farmers' elevators through this section, but their dividend is on the wrong side of ledger, unless they buy on the margin the other grain men do, which I think is very narrow.

As to how the problem should be handled by grain men, I have no suggestions to make, only think that as the country becomes prosperous again, and farmers find they are making some money, this movement will die out.

Yours truly, F. M. KREMER.  
Brookings, S. D.

#### FARMERS NOT JUSTIFIED IN BUILDING ELEVATORS.

*Editor American Elevator and Grain Trade:*—Referring to the statement in The Representative that it was in contemplation to build sixty farmers' elevators in Minnesota, Dakota and Iowa, will say that in our territory, Northeastern Iowa and Southeastern Minnesota, we do not hear of any movement made in that direction. We do not think that the farmers in the territory mentioned have grievances that would warrant anything of the kind.

At one of our stations, an elevator was built by the farmers and merchants combined, but we doubt if they ever received any substantial benefit by it. It simply increased the competition to that extent. We think the farmers in this part of the state have had good treatment from the local buyers and, so far as we know, are pretty well satisfied.

Yours truly, GILCHRIST & CO.  
McGregor, Iowa.

#### RAILROADS FAVOR FARMERS' TRACK SHIPMENTS.

*Editor American Elevator and Grain Trade:*—I do not think Mr. Donnelley's joint stock associations will amount to anything in this country. They are very vapory. I can assure you there will be no elevator deal here. There are places in the Northwest where the line elevators divide the trade. This is a grievance, but on the other hand there are places where there is a continual fight, and to this may be added the fact that the railroad companies are inaugurating a policy of favoring farmers' track consignments. In this they are gradually withdrawing their friendship from the line elevators. I look to see the finish of line elevators if the old carrying charges are not restored, which does not appear to be in sight at the present time. I am informed from reliable sources that few of the line elevator companies escaped loss last year, and none of them were satisfied with the year's business. If this condition prevails, the farmers may have an inning at the elevator business in time, but when that time arrives the construction of elevator property will not be through the instigation of Mr. Donnelley or anybody else of his stripe.

There is no question but what a farmers' elevator, properly handled, would be a good thing for the

stockholders, but the great difficulty of arranging the proper policy and the procuring of honest service will always be a menace to these institutions, and make their general adoption hardly probable; at least, the time is not yet.

Yours respectfully, WM. KELSO.  
Hallock, Minn.

#### SOMEONE HAS AN AX TO GRIND.

*Editor American Elevator and Grain Trade:*—I have been looking up the reported attempt of the Grain Growers' Association to form a line of farmers' elevators, and find that there is nothing of the kind in this part of the state. I do not think the farmers have any reason to complain, as they are getting all they reasonably could expect out of their grain.

The farmers own a house here, one at Flandreau, S. D., and another at Egan, S. D., and all have been rented for 5 years or more.

The farmers operate houses at Colman and Roman, S. D., but they do not buck against, but rather go in with the regular dealers, hence they do not affect prices and are able to make only a little more than expenses. The farmers' house at Edgerton I now own and thus it goes.

The farmers will have a big meeting, put up a house, run it one or two years and then rent or sell it and stand their loss.

There may be places where the elevator man is making too much. In this case the margin must be cut down to a reasonable price for handling the grain.

As near as I can figure it, someone has an ax to grind and is trying to work up an excitement.

Yours truly, WALTER PARKS.  
Airlie, Minn.

#### FARMERS' ELEVATORS GENERALLY SHORT LIVED.

*Editor American Elevator and Grain Trade:*—We are not aware of any general farmers' movement in the territory where we are operating, or elsewhere in the Northwest, indicating concerted action on their part in the way of building a line of elevators.

There are a great number of private elevators in the territory where we are operating, and frequently new ones spring up and old ones are sold out to some of the line companies, or change hands in other ways. At a number of points where we are operating the farmers have clubbed together and built elevators, and occasionally one of these is carefully managed and shows a profit, but more of them are recklessly managed and generally land in other hands after a few years.

As to the question of whether or not the farmers of the Northwest have grievances in the marketing of their grain to warrant a movement toward building their own elevators, will say, most decidedly, no, so far as we can see, since the railroads furnish cars if anything more freely to the farmers than to the elevator companies for the shipment of their own grain, when desired, and they have exactly the same advantages at terminal markets as the larger shippers.

Yours truly, ANDREWS & GAGE.  
Minneapolis, Minn.

#### MANAGEMENT OF FARMERS' ELEVATORS.

*Editor American Elevator and Grain Trade:*—I received some circular letters from the Grain Growers' Association some time ago, but I should judge that the movement to build a line of farmers' elevators has not been heard of by very many in this section, as I have not heard it mentioned at all. Unless it spreads very rapidly, I am of the opinion it will die out before it reaches this far down the line.

As was the case with the old Grange stores, the manager ropes the unsuspecting farmer at first, but he soon gets his eyes open and then the war begins and the farmers' elevator will pass into private hands. But they will give the dealer a whole lot of trouble in the meantime. I think the problem can be easily handled by the dealers. The managers of such concerns are like politicians, simply in it for what they can get out of it. If the dealer will prevent him making a dollar for three months, Mr. Manager will be ready for a compromise, and the dealer can about dictate his own terms. If three

months' grief will not bring him, give him six. He cares nothing for the farmers and will pocket every dollar he can and then, when the farmers get tired, he will buy their plant. It may take two or three years to bring this about, but if the dealers all watch the business closely they should be able to accomplish it in two years at the farthest.

I cannot give an opinion as to whether the farmers, where this movement started, have grievances in marketing their grain to warrant building their own elevators, but I believe the movement is brought about by unscrupulous agitators and politicians for their own gain. In this section the farmer has no grievance in that line, as the grain is all handled on a very small margin.

Yours truly, D. HUNTER.  
Hamburg, Iowa.

#### NORTHWESTERN FARMERS HAVE NO GROUNDS FOR COMPLAINT.

*Editor American Elevator and Grain Trade:*—There is no general movement, as far as we know, among the farmers in the section where we operate, toward building farmers' elevators, but we are not operating much in a wheat territory.

In the years past a large number of the farmers' elevators have been built in the section where we have elevators, but during the last year we know of but one that has been operated, excepting perhaps one elevator built last year.

We are quite sure the farmers in the Northwest have no grievances in the marketing of their grain to warrant a movement toward building their own elevators. A good deal of the dissatisfaction has been stirred up by men going through the country soliciting farmers' shipments. We think this has done more than any other one movement toward building these houses.

As to our views of how this problem should be handled by grain men, we believe it important the market should be at all times figured at as small a margin as the grain men can afford to operate on. Mistakes, no doubt, have been made in the past by grain men trying to buy stuff on too wide a margin, but so far as we know this mistake has been corrected in our country.

Mr. Donnelley has always been an agitator, but has never done himself or anyone else much good. We think it would be safe for farmers to carefully consider Mr. Donnelley's advice in most any line and then do exactly the opposite.

Yours truly, SOUTHERN MINNESOTA.

#### SOME THINGS THE FARMERS OVERLOOK.

*Editor American Elevator and Grain Trade:*—I have not heard of any movement to build a line of farmers' elevators. I don't think the farmers of the Northwest have any just reason for making such a move. The cry is gotten up, I presume, by some crank that wants a situation, as that is the case at all times where there is a farmers' elevator started.

We have had a farmers' elevator here for eight or nine years, and we rather like them. We have got along first-rate since the first tilt we had with them. It was built to give employment to two or three cranks, but they did not last long, for when they started we went after them hot and hard. They lost money and so fired their men and hired others. These men wanted to hold their places, so they came to time, and we have no kick coming on our farmers' elevator. I only wish that some of our neighboring independent buyers had as much sense as these farmers' elevator people here seem to have.

If the farmers would take hold of the political machine and get Congress to pass laws giving the Interstate Commerce Commission the power that it was intended they should have when they were first appointed, I think they would be doing something for their interests. Of course, the greater portion of the people think that the Commission now has power to regulate rates and prohibit rebates and discriminations, but how is it that the track buyer can ordinarily pay from 1 to 2 cents and sometimes 4 cents a bushel more than the grain will net the shipper who sells his grain on the same market as the track buyer? This can only be answered by the track man and the railroads.

Look at the rates the grain dealers in Northwestern



Iowa have to pay, which are almost double those paid by their neighbors at Kansas City, St. Paul and Minneapolis, then talk about there not being discrimination. These are the things that hurt the farmer, but he don't see it. He thinks that the grain dealer is making it all, and the ordinary merchant helps along this belief by telling him that the dealers are not doing the right thing by him, and that the town would have so much more trade if the grain men would only pay what they ought. The fact is, the merchant wants the grain man to shake the bush and let him catch the birds.

Yours truly,  
Marcus, Iowa. E. J. EDMONDS.

#### HONEST METHODS AND REASONABLE MARGINS WILL WIN.

*Editor American Elevator and Grain Trade:*—I hardly think the Grain Growers' Association movement to establish a line of elevators has made much headway here. In fact, I do not see where farmers in Southern Minnesota can have much kick coming, as there is a large number of independent elevators, and we always pay within a cent or two of what we can get for the grain.

I cannot see where the farmers could make anything by owning their own plants. I think they are making a mistake if they intend going into every market regardless of conditions there. I think they will fail, but if they have an honest purpose to see that their grain is handled on a reasonable margin, I presume it may benefit them in some places.

The remedy for the grain buyers, as far as I can see, is for them to handle the farmers' grain on a reasonable margin. My experience has been that the majority of good, honest farmers are perfectly willing to allow their grain men from one to two cents per bushel for handling their crops, and if a market is kept on this basis they should have no kick coming. On the other hand, there is a class of farmers that is always kicking on general principles. Nothing can satisfy this class of men, and it is useless to try to do so. Usually they fail in their own business, and are dissatisfied unless everybody else fails, also.

My candid opinion is that if every grain man will go right ahead and do his business honestly and on a reasonable margin, and stick to it, we will all come out right in the end.

Respectfully,  
Windom, Minn. C. W. GILLAM.

#### METHODS OF BUYERS THAT BREED DISCONTENT.

*Editor American Elevator and Grain Trade:*—There are no rumors or other indications of any purpose or desire on the part of farmers in this locality to build elevators or to engage in the grain business. The methods of conducting the grain business in the territory tributary to Chicago are very different from those in the territory tributary to Minneapolis. In this latter territory the crop is wheat, and it is handled by a large number of grain companies, who operate lines of elevators and warehouses from Minneapolis, or the eastern end of the line. The prices to be paid for wheat are determined upon at Minneapolis, and the buyers in charge of the country grain houses are notified daily of the price to be paid.

At those stations where there are only line houses there is a suspicious uniformity of price on contract grades, and even where there are independent buyers, no marked difference in the prices paid is often discernible. These conditions suggest the idea of a consolidated management and a concert of opinion as to prices to be paid and methods employed in doing the business. The visible results of this course of action are, a lot of well-to-do grain companies and a lot of dissatisfied farmers.

In the larger portion of the territory tributary to Chicago the wheat crop ranks third or fourth as to quantity, corn and oats being the principal products handled by the grain dealers, among whom there is no concert of action as to prices or methods. Each individual uses his own judgment, being governed entirely by the conditions surrounding him. He watches the deals in "wind" on the Chicago Board and pays more or less according to the way

that "wind blows." The greater portion of the time he cannot tell the value of the grain he is buying, from the market quotations received, either by wire or in the afternoon papers, as only the futures and speculative values are quoted. He must wait until next morning, when he gets the Chicago Daily Trade Bulletin, and from five to ten postal card bids from track buyers. If he can always tell the value of his grain by the Bulletin, he is a smart one, and as the postal bids vary from 1/8 to 2 cents per bushel, he is lucky if he knows which is the best. Frequently he will sell five or ten cars to the highest bidder, and in an hour or two will receive a message saying: "Acceptance declined. Bid you received was for Nebraska point. Excuse mistake."

These mistakes are occasioned by the fact that the railroads making rates from the Mississippi River to the seaboard give a lower rate on grain coming from Nebraska than if the grain originates in Iowa. All the heavy buyers quote prices to us at the Mississippi River, although some few continue to quote prices on track at stations, contrary to the requests and wishes of a large majority of regular dealers.

The manner of conducting the grain business has undergone a radical change in the past five years, and the commission house is not in it as in years gone by. The grain dealers are making their living, the farmers were never in better financial health, and, seeing no evidences of a conspiracy among the grain dealers, they are contented and exhibit no desire to go into the grain business in this locality.

Yours truly,  
Charter Oak, Iowa. E. A. ABBOTT.

#### DOES NOT FEAR FARMERS' ELEVATORS.

*Editor American Elevator and Grain Trade:*—In all probability many of the farmers' elevators stated by Donnelley's paper to be in contemplation will never go beyond the contemplative stage.

The grain trade in this vicinity have little fear of farmers' elevators. They have been tried and experience shows them to be short-lived. The farmer frequently imagines himself imposed upon, and this originates in various ways. For instance, some farmer ships a car of grain and, striking a favorable market, he saves something in the transaction. He at once proceeds to enlighten his neighbors upon the profit of shipping their own grain. If he is able, he will probably send an article to his agricultural paper advising his fellow farmers to ship their own grain.

On the other hand, should the market go against him, his pride will not allow him to admit that he has made a mistake, and that he could have done better selling his grain to an elevator company. He is simply mum.

Frequently some populist orator who has an ax to grind or some votes to solicit will harangue a crowd in the farming district and proceed to berate all manner of trusts and corporations in general and, (as grain is one of the principal products) the grain elevators in particular. He is very much interested in the farmers' welfare and so he tells them how much better they could do and how much it would be to their advantage to handle their own grain. He may also cite instances to prove the correctness of his position. Such a man often succeeds in convincing his audience that they are imposed upon. As a result a stock company is formed and the farmers proceed to do business.

There may be cases where these farmers' elevators are successfully operated, but if so it is an exception to the rule. Usually, after two or three years or less of ups and downs on the market, they go into the hands of a receiver, or are sold to anyone who will take them off the farmers' hands.

To my knowledge, we have no grain growers' association in this or adjoining counties. I think after 12 years' experience buying grain that I fairly understand the situation. Let me give my experience of the past season: Ipswich has three line elevators, two independent buyers and one mill. The market has been steady most of the time, buyers getting a reasonable margin for doing business.

About 30 miles to the southwest is another railroad, in fact, two of them running parallel and about two miles apart. These lines have a lower rate by 2 cents per hundred than we have. There has been a strife among the buyers at those points the greater part of the season, and frequently grain would be bought without any margin at all. Some grain much nearer our town was hauled to those points. Now, because of these circumstances the farmers imagine that they have been imposed upon by our buyers. They don't realize that we are doing business at a fair profit, while the other fellows are doing business for the fun of it. While they have no real grievance in a case of this kind, still, they think they have. A little experience, occasional losses, bad management and shortages usually convince the farmers investing in it, that an elevator is no bonanza.

Yours truly,  
Ipswich, S. D. R. H. ARTHUR.

#### KANSAS CITY CHECK WEIGHERS SHOULD BE RETAINED.

*Editor American Elevator and Grain Trade:*—As regards the "Check Weight Bureau" in vogue here, would say that, to my certain knowledge, the elevator operators of Kansas City are heartily in favor of the system and would greatly regret its abolishment. This has been the unanimous feeling from the inception of the Bureau to the present time. Before writing this, I called personally on some of the larger elevator operators and found, as in the beginning, all favorable to the present system. The attitude of the elevator men in Kansas City toward the check weighers reveals plainly the fact that everyone desires honest weighing, and is in favor of anything consistent that will guarantee the maintenance of that result.

As to abolishing the present system of state weighing, as suggested by the Kansas Grain Dealers' Association, and taking the matter under their own control and management, this is an entirely different proposition and, in my opinion, one that would be opposed by all elevator men at terminal markets where the system might be attempted. This would be unfair and no more reasonable than to force the country grain buyer to submit to farmers doing their own weighing and demanding settlement with the purchasers accordingly. It is not practical, to say the least.

As to the efficiency of state weighing, the principle is all right, but very much depends upon the morals and ability of the individual weighers, and if it were possible to have them appointed with those credentials necessary, instead of political records, their services would be very much more satisfactory to both shippers and elevator operators. I believe it should be the duty of state weighers to not only make a thorough examination of all loaded grain cars, but, in addition, to see that they are completely emptied before leaving the elevator where unloaded. They should also acquaint themselves with the facilities furnished by the various elevators for weighing and positively refuse their services where the weighing in every detail cannot be executed absolutely correctly and satisfactorily to both shippers and receivers.

If the chief weighers in the several terminal markets would instruct their deputies accordingly and insist upon their orders being carried out to the letter, we would hear of much less complaint from all concerned. But since we cannot expect perfection on this earth, I think the "Check-weighing Bureau," as operated here, adds very materially to the satisfaction of country shippers, as well as to that of the Kansas City elevator operators, and consequently should be retained as at present. These are the sentiments, I think, of every elevator man in Kansas City.

Yours truly,  
EDSON GREGG,  
With Chas. F. Orthwein & Sons.  
Kansas City, Mo.

Many grain dealers in Central Illinois say they will not be able to handle a large part of the 1898 corn crop, owing to the brisk demand from cattle feeders.



### ELEVATOR PROPOSITION TO MONTREAL.

The harbor commissioners of Montreal have received a proposition from the Messrs. Connors, of the Buffalo Courier, and H. Youlder and Colby of Cleveland, O., to organize a company to establish terminals in the Montreal harbor for handling grain, etc., if they are allowed certain privileges. They offer to complete at once one elevator of large capacity and also freight sheds to handle all kinds of freight. Their plan would be to erect at Windmill Point, at the lower end of Windmill Point Wharf, with the basin on one side and the canal on the other, a steel elevator, with 2,500,000 bushels' storage capacity and other terminal buildings.

The promoters ask no bonus, but do ask for leases for 99 years of one piece of land at Windmill Point, with 1,200 feet frontage, and another of 2,000 feet frontage on the water, as well as one of a pier; and they also want assurance of continued depth of water; abolition of wharf charges or their reduction to a maximum rate of five cents per ton up to 250,000 tons handled, or 2½ cents if that number of tons be exceeded, and so on. The proposition is still in the hands of the harbor commission for action.

Meantime, W. W. Ogilvie has begun work on an elevator site on his own property, on Windmill Point basin.

### THE CANADIAN CANALS.

Canada's ambition to take part in the prevailing world-wide fever of commercial expansion has directed attention to her waterways, present and prospective, as the greatest factor of her commercial future. Canada hopes to become a great carrier—to absorb, perhaps, a part of the great traffic which has made England rich by earning the carrying charges both ways, and this wealth Canada expects to come in the first instance as tolls on the grain of the Northwest going to the seaboard. For this purpose the Welland canal was built to open a passage for grain around Niagara. Later on the lake-and-rail routes through Canada have rivaled that waterway in importance in the same traffic. The Parry Sound route, with its new elevators and fleet of five steamers belonging to the railroad, and other vessels hauling the grain to the St. Lawrence, making, all told, 125 cargoes landed at Depot Harbor, handled last season 10,000,000 bushels of grain and 140,000 tons of package freight from the Northwest, and established a record of fifteen days for grain from Duluth to Liverpool. The greater part of the grain handled by this route was exported from Montreal. The modern elevators at Depot Harbor and Coteau Landing are supplemented by 1,000-bushel cars and the Mogul type of locomotives.

Then there are the Midland (Grand Trunk) and Owen Sound (Canadian Pacific) routes, operating on the same system of lake-and-rail carriage, which also handled considerable quantities of grain during the past season—fortunately so, considering the congestion during the busy weeks at Buffalo.

The success of these efforts to divert grain from Lake Erie to a route more nearly directly east and west has stimulated both Montreal and Toronto to action on behalf of still other routes. Montreal urges the Georgian Bay canal, making an all-water route to that city via Ottawa River. Toronto wants the Collingwood-Toronto route developed—a water-and-rail route to tidewater via Toronto as the Parry Sound route is via Coteau Landing. A public meeting on behalf of this latter project was held on December 8. The attendance was not large; but the advocates of the "Huronario" route profess to be encouraged; or, at least, will not be discouraged; which is quite as well, perhaps. Another meeting to agitate the matter will be held during the present month. The project involves the improvement of Collingwood and Toronto harbors, the betterment of the railway system uniting the two ports, and the improvement of the canal system between Toronto and Montreal.

In the meantime the improvement of the St. Lawrence canal is going on, so that by spring, 1900, the

fourteen-foot channel is expected to be finished. This new condition of things will, doubtless, add to Montreal's grain business; although it must be seriously handicapped, on a close completion, if it be true, as was stated at the Toronto meeting referred to, that at Montreal it cost \$1,250 to handle 250,000 bushels of wheat, while at Buffalo it costs only \$312.50.

### ABOUT BEARINGS.

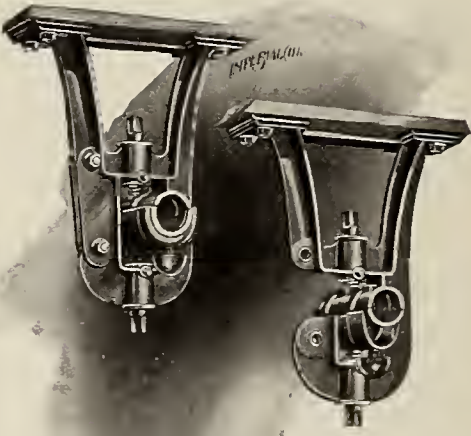
The life of a machine often depends largely upon the care given to its preservation. The workmen in charge of necessity keep the visible parts neat and clean, but it is often the case that the unseen parts, the bearings, for instance, are neglected. Consequently, bearings are particularly important in every

the binder, form a series of vertical triangular slots which act as surface for the action of capillary attraction. The Capillary Bearing has no running part to stop or get out of order, and as the oiler will not clog or carry dirt or foreign substances, the shaft is continually supplied with a constant flow of pure oil, which continues the same at any speed, under any strain and at any temperature. Bearings of this type have been known to run eight months with one filling of oil, on a 2 15-16-inch shaft, operating at 150 revolutions per minute, twenty-four hours per day.

The Chain-oiling Bearing is one of the most satisfactory of similar patterns in use. The oil chamber is so constructed that the presence of sand, grit, etc., is entirely obviated. The chain does not come in contact with the bottom of the reservoir at any



RING, CAPILLARY AND CHAIN BEARINGS.



HANGERS EQUIPPED WITH MODERN BEARINGS.

line of manufacture, not only in maintaining a clean and neat-looking plant and the manufactured goods free from spotting by grease, etc., but also in the saving of lubricators and in saving of wear upon the line shafting.

The methods for oiling bearings patented and manufactured by the Dodge Manufacturing Co., of Mishawaka, Ind., are particularly intended to meet and maintain all of the above advantages. This company manufacture three styles of bearings, as illustrated herewith, called respectively the Capillary-oiling, the Chain-oiling, and the Ring-oiling. The Capillary Bearing, after passing through a series of severe tests, continued through several years of practical application to all classes of work, has been given the hearty approval of all mechanical men who have tested and inspected it; and it is claimed to have been proven to be the most efficient, cleanly, convenient and simple bearing yet offered to the public. The oiler proper is made of hardwood, with light transverse saw-kerfs cut alternately from either side, which, when the block is compressed in

point; the oil being drawn vertically to the top of the shaft and spreading through channels to all parts of the bearing, and thence back to the oil reservoir for re-use. The reservoirs are large, and thus hold a supply of oil sufficient for large continuous run.

The system of lubricating by Ring-oiling Bearings is effected by means of tempered steel rings, which are bent to circles enough larger than the diameter of their shaft to allow their lower portion to run constantly in oil. As the shaft revolves the rings revolve on it and carry up to the journals sufficient oil for thorough lubrication. Any surplus oil is removed by scrapers, or wipers, at each end of the bearings and then drops back into the oil receptacles.

These bearings are all gotten up on mechanical lines, and are worthy of the attention of every power user.

The hangers manufactured by the company are simple and neat in design and at the same time are constructed upon lines of great strength. All of the hangers, pillow blocks, etc., have machine finished



bases, and are also made to be used with or without the link. All bearings are machine reamed and faced. Further information will be furnished by the manufacturers on request.

### SOUTHERN OHIO GRAIN DEALERS' ASSOCIATION.

On Monday, February 20, a meeting of Southern Ohio grain dealers was held at Washington Court House to organize a grain dealers' association, which has been called the Southern Ohio Grain Dealers' Association.

Representatives of some 50 or 60 firms in that territory were present, including grain commission men from Cincinnati, Columbus, etc. Mr. Boden of Boden Bros., millers, New Vienna, was elected president and L. W. Dewey of Lancaster, secretary.

The objects of the organization are concerted action for the purpose of regulating freight and grading of grain, and the educating and influencing of farmers in the matter of raising the standard of grain products for market, etc.

Interesting addresses were made by several of the members, and some important suggestions offered which may prove of importance to farmers in the matter of the manner of handling and caring for their grain, etc.

### SOUTHERN GRAIN ASSOCIATION.

A meeting of grain shippers to the South from a number of leading markets of the middle states was held at Louisville, Ky., on March 4, for the purpose of taking action toward correcting the abuses that have grown up in the Southern trade.

The meeting was attended by some fifty representatives of grain houses in Chicago, Kansas City, St. Louis, Atchison, Leavenworth, Cairo, Cincinnati, Louisville, Henderson, New Albany and Evansville. The gentlemen met at the office of A. Brandeis & Son, and organized by electing John F. Kuhn, of Bartlett, Kuhn & Co., Evansville, Ind., president; W. B. Harrison of St. Louis, vice-president; and Alfred Brandeis, of A. Brandeis & Son, Louisville, secretary-treasurer. The Association contemplates a local vice-president and a secretary in each market which has a representation in the Association. The membership is open to representatives from every market between the Missouri River on the west and Cincinnati on the east, that does business into the Southern states.

The meeting, after a thorough canvass of the condition of the Southern trade, adopted and agreed to do business hereafter according to the following by-law:

"On and after March 6, 1899, all sales of grain by members of this Association to the states of Missouri, Arkansas, Texas, Louisiana, Tennessee, Alabama, Georgia, Florida, South Carolina, North Carolina, West Virginia, Virginia and District of Columbia shall be subject to the following terms and conditions:

"All sales to be made subject to weights and inspection of the markets from which sale or shipment is made; official certificates of weights and inspection to be final between buyer and seller; the buyer to be required to pay drafts with bills of lading and official certificates of weight and inspection attached upon date of first presentation. The provision regarding official certificates of inspection to be waived on sales of sample oats, and samples wheat grading below No. 3.

"Brokers to be required to furnish the sellers with contract embodying these conditions, signed by the buyer."

Kentucky was omitted from the list of states owing to the peculiar conditions involved in the distillery trade.

The initiation fee was fixed at \$5; and the privilege is given to any member to withdraw from the Association by giving sixty days' notice in writing to the secretary of the Association. The next meeting will be held one year hence at St. Louis.

At St. Louis W. B. Harrison has been elected president of the local organization, and Geo. F.

Powell secretary. A committee composed of President Harrison, Secretary Powell, E. L. Bartlett and Charles E. Morris has been appointed to prepare a code of rules and regulations for the government of the local association, and to draft a circular to be sent out by St. Louis members in regard to the quoting and sale of grain in the Southern territory.

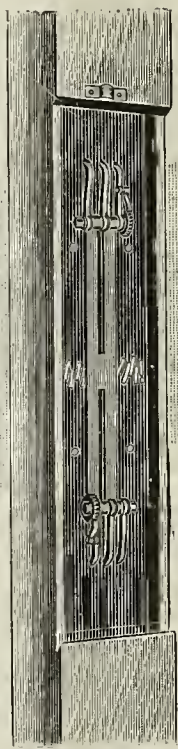
At Cincinnati H. Lee Early has been selected as local president, and W. W. Granger Jr. as secretary.

### A NOVEL BELT STRETCHER.

The accompanying illustration shows a belt stretcher which, in addition to its other obvious advantages, possesses the peculiar merit of being adapted to stretching a belt in the box of an elevator.

The stretcher is composed of hooks working on shafts, with a strap connecting the two shafts. Holes are punched in the belt to receive the hooks, and by the use of an ordinary wrench the strap is wound on the shafts and held by the ratchets and pawls. There are no separate screws, clamps, bolts or other parts to be lost when stretcher is not in use.

Although this stretcher has never been placed upon the market, it has been in daily use for several years, never failing to do its work in a satisfactory manner. It is made in two sizes, No. 1 with



three hooks at each end and of such size as will work all right in a 6-inch elevator box. This size has been used successfully for stretching a 10-inch conveyor belt. The No. 2 size has four hooks at each end.

This stretcher is manufactured by W. D. Browning at Jackson, Tenn., who will doubtless furnish any further information desired concerning it.

### NEW ELEVATOR AT ST. JOE.

Harrison Bros. have begun the erection of an elevator at St. Joseph, Mo., to have capacity for 1,000,000 bushels. It will cost \$175,000; and will stand near the Kansas terminus of the bridge. The site comprises fifteen acres of land. The building will be 230x90 feet, and high in proportion. The bins will be steel tanks.

### THE NEW FITCHBURG ELEVATOR.

The new Fitchburg Elevator at Charlestown, Boston, has been opened for business. The building is 260x84 feet, and 160 feet high, having 1,000,000 bushels' capacity, and is of steel, protected to be fireproof. The bins are of wood, but are also fireproofed. The house has unloading capacity of 240 cars in ten hours, and is equipped with a complete dust collecting system. The new house is, in fact, one of the finest modern elevators in this country.

### DOTS AND DASHES

'Twas ever thus from childhood's hour,  
I've seen my fondest hopes decay.  
I've never felt the Bull's great power  
But Bears have knocked the price of May.

Congress has agreed to a resolution permitting the importation by bona fide farmers of seed wheat duty free.

Several boys at Toledo were recently convicted of stealing wheat from cars on track and given 30 days at the workhouse.

Duluth grain shippers expect to have not less than 25,000,000 bushels in store by the time lake navigation reopens.

A farmer in Champaign County, Ill., thrashed his stacked oats during the last week of February, finding them in "fair" shape.

A Kentucky paper says that much corn still remains in the fields in certain parts of Kentucky, notably in the neighborhood of Hopkinsville, owing to the cold weather.

The city of Kingston, Ont., has asked of parliament that municipalities be given power to exempt grain elevators from taxation, in the same way as they are empowered to exempt manufacturers.

The Grand Trunk Elevator at Portland, Me., recently took in 300,000 bushels of grain and discharged 300,000 into steamships, making a total of 600,000 bushels handled through the house in one day.

A shortlived strike occurred at the Armour elevator now building in Chicago, when the sheet iron workers objected to the presence of certain non-union men. The latter were discharged and work was resumed.

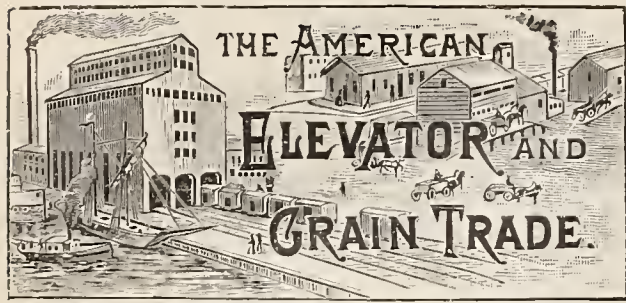
A Tuscola, Ill., farmer on February 24 sold his last 95 tons of broomcorn to a broker at \$100 a ton. This being the top notch paid to the farmers, it will be seen that this year, at least, there was a little velvet in the brush for the brokers.

The floods of the Yellow River of China having done their usual damage to crops and left thousands of Chinese in the Shang Tung Province in starvation, certain San Francisco merchants have started a movement to have a steamer load of Indian corn shipped to the American consul at Chee Foo for distribution among the sufferers. It is believed that while it will relieve suffering now it will also be a good advertisement in China for corn.

Speaking of the bean weevil, the Orange Judd Farmer recommends the carbon bisulphide process as the best for getting rid of the pest in the bin. It has also been suggested that if the beans are heated to 145 degrees as soon as ripe, the partially grown larvae will be destroyed without injury to the germinating quality of the seed. Late planting is also advised so that the crop will escape the ravages of the adult insects. In the latitude of Central Illinois, beans planted from June 20 to July 10 were almost free from the weevil, while those planted early were seriously injured.

The optimistic secretary of agriculture, Mr. Wilson, is to make an attempt to farm the Yukon Valley, and raise grain and vegetables on the lands contiguous to the Klondike gold fields, and has obtained an appropriation of \$15,000 to try it. During the last year Professor C. C. Georgeson planted seeds obtained in Norway at Sitka, Juneau, etc., with results that were so successful that the secretary took samples of the oats and barley grown there to show the members of the cabinet what Alaska could do farming it. The professor also raised a great many vegetables; while grass feed for cattle is claimed to be abundant in the country, redtop growing as high as a man's head. Timothy also does well. The department of agriculture is also in receipt of a sample of oats and timothy from a point south of Circle City, where they have reseeded themselves for several years. The oat heads are hard and large. In short, there's no telling what will happen next in Alaska, which, as everyone knows, has a very mild climate on the sea side of the divide, though rather inclined to be frosty on the other side.





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HARLEY B. MITCHELL, - - - Editor.

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### ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

### CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., MARCH 15, 1899.

Official Paper of the Illinois Grain Dealers' Association.

## GRAIN ELEVATOR MACHINERY PRICES.

The grain interest is, at the present time, confronted with a very unusual condition of affairs in respect to the iron industry. Within the past six months the manufacturers of sheet steel, band iron, boiler plates, pig iron, merchant bars, and all grades of tin have advanced prices 40 per cent. In addition to this the mills are nearly all behind on orders and will not guarantee to deliver material at much less than four months' time. The natural inference from this is, that manufacturers of grain handling machinery will advance prices. We are informed that this advance has taken place, yet not in proportion to the advance in the raw material, owing to the fact that many of the manufacturers of grain handling machinery and transmission appliances have contracts on hand at the old prices; but these contracts are constantly being filled.

The boom in the iron industry has been the cause of sending the price of shafting up 25 per cent in carload lots; other goods already affected are: Conveyors, grain spouting of all kinds, elevator buckets, elevator boots, iron pulleys, sprocket wheels, pillow blocks, hangers, elevator boot tanks, iron roofing and siding, and, in fact, about all elevator machinery into which iron enters largely into construction.

It is thought that prices of grain elevator machinery will advance still farther, and as present indications point to an unusual activity this summer in grain elevator building, those who contemplate remodeling old or building new plants should place their orders early.

All the grain elevator machinery manufacturers are finding it difficult to obtain raw material within any definite time, and if this state of affairs continues, those who place their orders late in the season are liable to experience serious delays.

## SOUTHERN GRAIN ASSOCIATION.

The organization of the Southern Grain Association at Louisville on March 4 inaugurates a much needed reform in the methods of conducting the grain shipping business into the South. Some years ago, in the brisk competition for business, certain shippers who enjoyed a large trade in that territory, whose mode of drawing on consignees had originally been demand drafts with documents attached, to be paid on presentation, in order to gain a temporary advantage, changed their mode of payment to read, "Drafts to be paid on arrival of grain." Of course, in a short time practically all houses in the Southern trade made their drafts read the same way. The drafts at first were promptly paid on arrival of the grain, but the shippers having yielded an inch, the buyers took an ell, so that it became nothing unusual for drafts to remain unpaid for four, and even eight, weeks.

Of course present margins in grain would not stand any such a system, and besides there came to be not a little friction at certain points over questions of inspection, so that this association became a necessity to bring about a reform that simply had to come.

In forming the association, however, the members have no intention of working a hardship on the Southern trade; but, rather, they believe that Southern grain merchants of standing will find the new mode of doing business will in no way hamper their operations and that the only people likely to be unfavorably affected by it will be the irresponsible and dishonest dealers, who never hesitate to ignore their contracts whenever it becomes their interest to do it, and the elimination of this class of traders will be as beneficial to the Southern trade as to the shippers.

The association is an enthusiastic one and its members are entirely harmonious and determined to enforce the association trading rules, at the same time desiring their Southern customers to feel that nothing will be left undone to foster that trade.

## THE GRAIN GROWERS' ELEVATORS.

With a view to learning to what extent the movement for the erection of farmers' elevators, inaugurated by the Grain Growers' Association offshoot of the Minnesota Farmers' Alliance, had permeated the Northwest, the editor sent inquiries to a number of representative elevator men, whose replies will be found in the "Communicated" department of this issue, to which the reader's attention is directed.

Although the news columns of this paper have during the past two months reported quite a number of farmers' elevator projects, including the more recent scheme of a Farmers' Elevator Association, created to build a house at Duluth as the terminus of a line of farmers' houses, nevertheless the letters of our corre-

spondents are better evidence of the real character of the movement than Mr. Donnelly's vapory The Representative, the mouthpiece of the politicians who always make more noise in such a movement than the results at all warrant. So in this case we are ready to believe a priori that the Grain Growers' Association furore in the newspapers is largely a matter of wind begotten by place-hunting politicians and agitated for their benefit.

For the grievances of the Northwestern farmers, which are the alleged necessity for this movement, are wholly vicarious and worry the promoters more than they do the farmers. In a country where competition is as sharp for the grain as it is in the Northwest, it is simply preposterous to talk of robbing the farmers, and a serious movement to get farmers into the elevator business could not stand examination by a rational man for a moment on its merits in the Northwest any more than it can in the West. The movement is wholly an artificial one, and doubtless will soon collapse as similar fakes of politicians have in the past.

The correspondence, however, is very interesting, and treating as it does the subject of farmers' elevators, as well as the specific topic, from many points of view, the reader will find it all exceptionally valuable reading.

## THE BUFFALO ELEVATOR POOL.

Geo. W. Albridge, superintendent of public works of New York state under Gov. Black, in his annual report, devotes not a little space to a discussion of "the abuses resulting from the greed of the so-called elevator trust, or combine, of Buffalo," which he "believes" is a "proper subject for legislative inquiry" and "remedial legislation."

As the so-called elevator trust of Buffalo went into a decline several months prior to the writing of Mr. Albridge's report, the relevancy of his remarks was not apparent. Indeed, many critics declared his assault upon a pool which did not, in fact, exist, was gratuitous and perhaps of the nature of a "you're another" reply to certain sharp criticisms which had been made upon Mr. Albridge's management of the Erie Canal, which was characterized as but little short of scandalous.

But it now transpires that perhaps Mr. Albridge was not so far awry as he seemed to be, for on March 9 the telegraph gave the information that the lake carriers, together with the Buffalo elevator owners, had held a meeting that day to revive the elevator pool, Frank J. Firth of the Lake Carriers' Association presiding.

This meeting was a private one, but the press telegrams say that the plan is to divide the Buffalo elevators into five classes, based upon their physical condition, the elevating business to be proportioned among them according to class. As it is important to the elevator interests that the pool be formed before the lake carriers shall adopt new rates and bill of lading, the elevator men asked the lake carriers to hold the question of rates and bill of lading open for ten days to enable them to effect a pool satisfactory to all interests.

That elevator rates at Buffalo the past season were below a profitable rate is generally ad-



mitted, so that a rise in charges may be anticipated, and this ought not to be objected to; but if the pool shall attempt a renewal of the extortions of the late pool there will certainly be music. This is hardly probable, however, since the Buffalo men must by this time understand that the competition of other routes has become more efficient than formerly.

### PRICE MAKING FACTORS.

The two events in the market have been the cold snap and its possible effect on winter wheat and the publication of the government estimates on the reserve. The damage done by the cold weather cannot yet be determined. Very pessimistic reports have come from some localities, while from others the news is reassuring. It requires "spring weather" to tell the extent and geography of the damage. The weather over the winter wheat section has not been favorable to the crop; but in general reports are not discouraging, except as to late-sown grain.

The government report on the farm reserves on March 1, made public March 10, was a distinct bear influence. The reserves of wheat were placed at 198,000,000 bushels, of corn 800,500,000 bushels and of oats 283,000,000 bushels. The wheat reserve is the largest ever reported and taken in connection with the final government estimate of the yield of 1898 constitutes a bear argument. The holdings of corn have been exceeded four times in the past twelve years, notably in 1897, when the amount reported was 1,164,000,000 bushels, or 51 per cent of the crop. The reserves of oats were 272,000,000 bushels in 1898 and 313,000,000 bushels in 1899.

### THE CHECK-WEIGHT BUREAU.

We rather expected to see some sort of a formal reply from the Kansas Grain Dealers' Association, or from individuals, to ex-State Inspector Culver's criticism of the report upon the Kansas City Check-weight Bureau, referred to here a month ago; but none has appeared that we are aware of. We are, therefore, inclined to believe that Mr. Culver has made a mistake. An institution, however unofficial in character, which satisfies both shippers and receivers and is approved by elevator men also must have some strong points to commend it, and really needs no heroic defense.

A good word on this subject has been said, we believe, by Mr. Edson Gregg, published in the "Communicated" department in this number—one that is eminently sensible and to the point. Being both a traveler through Kansas and intimately associated with the receiving and elevator interests also, Mr. Gregg is in a position to know the temper of all parties in interest, while his word of suggestion to the Kansas Association as to their proposition to have the state weighing system abolished and turned over bodily to the Association is timely and pertinent. This would be quite as unfair as it would be for the elevator men to arbitrarily insist, as perhaps they might, that the Check-weight Bureau's representatives should be kicked out and kept out of their elevators. Of course, it is in one sense a hardship that the Kansas shippers are required for their own pro-

tection, as they think they are, to keep the Check-weight Bureau's representatives in the elevators at their own expense; but until we shall all come to that happy land or time when perfection shall be as commonplace as the pearly pavements, it is hard to see any other way for the Kansas shippers to get an equal amount of satisfaction for their money and still keep on good terms with what some grain men and farmers are pleased to call their natural enemies, the elevator men.

The Check-weight Bureau may not be a goose that lays golden eggs, but it certainly is too good a thing for the Kansas shippers to hazard by asking for the earth in place of it.

### A NATIONAL INSPECTION SYSTEM.

The suggestion of the South Dakota committee, referred to on page 368, that a system of grain inspection created by Federal law and conducted by the national government exclusively would solve the grain inspection problem, opens up an interesting question, not wholly new, perhaps, since the idea of uniformity of inspection had previously been proposed by Mr. Ulrich of Springfield, Ill., and Mr. Morgan of Coffeyville, Kan., not to mention others. It is not a question, however, that can be settled in a dogmatic manner; for the necessity for a change of present methods by no means follows because even a large number of wheat growers, however important in their immediate neighborhoods, may be dissatisfied with the grading of their stuff on the Duluth market.

If, however, official inspection were compulsory, which it is not, the committee's dictum, that "the people of every state have a right to be heard in the inspection of grain," would have greater value; and if the rules governing the appointment of acting inspectors, as proposed by the committee, were in fact different from or an improvement upon those now in force, even in Minnesota, whence comes the greatest complaint of incompetency, the force of the committee's argument is still greater. The truth is, whether under state or government control, inspection must of necessity remain, as the committee complains it is, a "matter of judgment only;" at least until more scientific methods for grading grain in vast quantities than are now deemed practicable shall have been devised.

On the other hand, uniformity of grading would undeniably be a trade advantage, however in practice it might fail to improve the quality of the South Dakota farmer's wheat; and it is possible a national inspection might be a benefit to the export trade, perhaps more than it would be to the domestic trade. If the home government's inspection of Danish butter, for example, prior to its exportation, is sufficiently rigid and commands the confidence of the English importer and consumer to the extent that such butter sells in the original packages without subsequent English inspection, on the strength of the Danish government's certificate, as we are informed it does it might be desirable for the United States government to grade export grain with a similar accuracy. But the question occurs, suppose this

were done, would that fact do away with the system of sale by sample, which as to milling grain, at least, is the last step in the transfer after all?

### THEY LEAVE THE ASSOCIATION.

The Kansas City Board of Trade on February 27, by a vote of 98 ayes to 28 noes, adopted a resolution forbidding its members or their employees to hold membership in the state grain dealers' or other similar associations. The motives animating the 98 members voting for the resolution, as formulated by Secretary Bigelow, published on another page, are not as clear as perhaps they meant to state them; but at any rate "Betsy and I are out."

Of course, under the circumstances, considering that the loss of these memberships, say fifty or more, by the Kansas, Nebraska and Oklahoma associations means also a loss of some revenue to them, the resolution is not popular in those states; but its operation will by no means cripple the associations financially nor is it likely to affect the natural feeling of fair play which the associations have no doubt created by this time in the minds of receivers toward the regular dealers as compared with the irregulars. Indeed, the associations are probably strong enough to protect themselves in this regard, although in some respects it may be less easy to do so than in the immediate past.

The resolution, however, is but one more step in the Kansas City program to occupy a unique position with reference to the shipping trade. Some time ago, for example, the Board by resolution had its members cut off all market telegrams to their customers, who must now rely upon the telegraph companies for such information. Then it cut off all private market reports, and requires all the members' customers to rely upon a general market report paid for by all interested. And now it orders the members to "get out of the associations." What next?

It has been suggested that all these various steps mean that the distinctively commission man is being "worked" by the heavy track buyers and exporters, already a conspicuous feature of the trade of Kansas City. However this may be, this inevitable straining of the connections between shippers and the commission men is something which the latter will do well to keep watch of, as they are likely to be either the chief beneficiaries or the sufferers. Which it shall be time will tell.

The London Times' proposition, made when a British treasury deficit was disclosed in connection with a call for larger naval expenditures, that wheat and sugar be taxed, was scotched with scant courtesy. The "bread-and-treacle tax," as it once was called, was never popular with the English masses, and when the Times proposed to revive it a cartoon appeared picturing a portly, fur-bedecked millionaire, whose pockets bulge with state grants, in the act of beseeching the Chancellor of the Exchequer to lift death duties and other taxes from his shoulders, and put them upon the ragged little street urchin who munches his bread and treacle for dear life. The British navy may, and probably will, be increased, but it will not be through a tax on wheat.



## EDITORIAL MENTION

With the brush at \$150 a ton and brooms going skyward at 50-cent rises, the broomcorn corner seems to have made a clean sweep.

The marine underwriters at a meeting held in New York, February 16, agreed to an increase of cargo rates on grain for the coming season, amounting to from 20 to 25 per cent.

Up in Manitoba grain dealers and others are worried over the amount of wheat that has been classed as "tough" or damp by the inspectors, and how it will act when warm weather sets in.

The position of the foreign buyer of grain is radically different from that of the American. It is the foreign buyer who is the confirmed bear on crop news. Here the buyer tries to boost the market.

The Illinois senate committee on warehouses having in charge Senator Landrigan's bill to repeal the warehouse act of 1897, after a long postponement, were due to take up that bill for consideration on yesterday.

The annual meeting of the Nebraska Grain Dealers' Association will be held at Lincoln about April 11, the exact date not being as yet announced. It will be, however, immediately after the adjournment of the Legislature.

Quite a number of recent suits on verbal grain contracts in Illinois having failed, owing to the dealer's being unable to prove the contract, is this advice impertinent—either use a written contract or swallow your dose without kicking?

The ship-subsidy propaganda is very busy nowadays with its literature in the country press; but when ocean room for grain goes begging at a cent a bushel to Liverpool, the pressing need of more ships—subsidized—is not so apparent as it might be.

Chicago commission houses complain that competition for the business has reduced the commission to as low as a sixteenth sometimes. This is cutting it pretty thin, but not thin enough, perhaps, to satisfy the farmer, who thinks himself the only person entitled to live.

Minnesota is entitled to the bouquet for this winter's assortment of legislative freaks. Should half the bills offered to regulate the grain trade get on the statute book, elevator property in that state, local as well as terminal, would be worth just about its weight as scrap iron and kindling wood.

In spite of Agrarian agitation in Germany against things American, our trade with that country, especially in agricultural products, has steadily increased. Thus, in 1896, our exports of corn to Germany were valued at \$6,755,480 while in 1898 they rose to \$15,866,888. In the former year wheat to the value of \$2,884,-

888 was exported while last year it was valued at \$5,745,116. Increases run through nearly every item.

"Broomhall's" has suggested a change in the method of compiling "visible" statistics in England, which meets with favor abroad, at least. The change proposed is to include all millers' as well as grain merchants' holdings in the visible, whereas now only the merchants' holdings are so tabulated.

The German farmers, who some time ago succeeded in criminalizing speculation in grain, just as the Minnesota freak legislators are trying to stop it in that state, are now looking longingly to an alcohol trust as a means for securing better prices for grain and potatoes, which are lower than every since public trading in grain was prohibited.

The rumor has been revived that Mr. John Kelley is about to build a "bonded" or public elevator in Kansas City, to issue negotiable warehouse receipts on grain in store, which may be used as collateral. The bankers of the city seem to be especially pleased with this prospect of increasing their loans to grain merchants on this kind of paper.

The latest revised list of members of the Nebraska Grain Dealers' Association shows additions of 49 members representing 73 houses, and losses since last September of nine members representing ten houses, leaving a net gain of 40 members and 63 houses. Secretary Brewsher has evidently not been "snowed under," notwithstanding the hard winter.

The Texas Grain Dealers' Association will hold its next meeting at Fort Worth on May 8 and 9; and immediately after adjournment will start upon an excursion to the city of Mexico, stopping en route at San Antonio, Monterey and San Luis Potosi. Members of the Association and their families and members of the press will make up the party.

While an Indiana farmer was in his barn the other day, getting a load of last year's corn ready for delivery, he discovered he had partly lost his speech—he could talk but could not use the words to express his wishes. It is not stated what the condition of the corn buyer's vocal organs was when he received the corn—maybe it wouldn't be proper in polite circles.

The privilege room of the Chicago Board, which has been gradually recovering its life during the past month from the depression of grand jury inquisition, received another chill the other day, when Mr. John Hill announced that if dealers in "puts and calls" do not voluntarily abandon that kind of trading he would take steps to force its abandonment.

The Senate of Kansas has agreed to a new "anti-trust" law, which is aimed at the grain dealers' association of that state; at least, its author, Senator Reser, says it is, and he ought to know. The senator's complaint is that the association men exact a "tribute" from the farmer of two cents a bushel for handling his grain, and by various devices prevent the farmer from shipping his own grain. Whether the law,

which is framed to make the association a "conspiracy," would stand the racket of the courts we cannot tell; in fact, no one can predict what a court elected by the people will or will not do nowadays with a given principle of ethics.

It is unofficially stated that the Interstate Commerce Commission does not consider the present export corn rates of 13½ cents from St. Louis and 16 cents from Chicago a violation of the "long and short haul" clause. Of course, not; all railroad men know that the longer the haul the shorter the rate, and the present arrangement is quite in line with that theory.

The Insurance and Finance Chronicle of Montreal reports only two elevator fires of any proportion as occurring in Canada in 1898. These were at Sidney and Pense, and the combined loss was \$27,000. Have our Canadian friends any special secret in the care of elevator property that the losses are so small? Is it chance, or one of those local conditions that baffle reason?

Secretary Brewsher of the Nebraska Association "begs leave" to remind the Nebraska grain dealers that storing grain for farmers without a license as public warehousemen is risky business, the elevator being subject to a heavy fine. The practice is being rapidly discontinued throughout that state—most rapidly in those districts where the subject has been debated in the local meetings.

The Secretary of the Kansas Association calls attention to the fact that recently the Supreme Court in his state held that flour billed "SO Notify" does not hold the railway responsible for the merchandise after it is delivered to a connecting road, even without a bill of lading. This ruling makes it imperative that the shipper should be informed in advance of the responsibility of the consignee.

The recent decisions by the United States Supreme Court that the individual states cannot enforce laws fixing railway rates that do not admit of the roads earning dividends and paying their debts have had a depressing effect on the legislatures this winter. In Nebraska the lawmakers actually refrained, on the recommendation of the Railroad Commission, from enacting such a law until the Supreme Court shall have rendered a supplemental decision defining more clearly the powers and limitations of legislatures and railroad commissions under this new phase of the rate question.

The effort of shippers of Northwestern Iowa to recover overcharges from the railroads—which received somewhat of a black eye by Judge Shiras' ruling that although the interstate commerce law forbade exorbitant charges the shippers who paid them without protest were not entitled to recover—took a new turn recently. A number of shippers at Holstein, Iowa, having bunched their claims, have renewed their attack on the Northwestern road, setting up the claim that the Western Freight Association, of which the road was a member when the overcharges were paid, was an unlawful combination whose members had con-



spired to maintain an excessive rate. The many complainants who dismissed their suits on the strength of Judge Shiras' opinion will be interested in the result of this revival of the matter.

Mr. McIntyre is still working vigorously on his spring wheat mill combination. At last accounts his combination will include practically all the mills in Milwaukee, Duluth and Superior, together with the Hecker-Jones-Jewell Company of New York and possibly one Minneapolis company. While not as large as originally contemplated, it will be a great factor in the spring wheat trade to reckon with.

The Eastern Minnesota Railroad merits notice for its efforts to stop the stealing of grain from cars in transit over its tracks. The depredations having become more and more serious, the road within the past four weeks has established a detective service at its terminals to watch grain cars, which has already made a number of arrests. It is to be hoped this example will be imitated by other roads.

The story comes down from West Superior, Wis., that Thos. McIntyre, the flour combine promoter, has temporarily dropped flour and elected to appropriate, at so much "per," of course, all the elevators in that neck of the woods, preliminary to another push for the flouring mills. The reporter kindly informs us that this is a "big undertaking and will take millions," but neglects to say whose millions.

M. Jean de Laverdo has produced an astonishing theory of the cause of spontaneous combustion in damp hay. That hay when damp is exceedingly liable to "go off" of its own accord is pretty well settled. As a matter of fact most fires in barns are mysterious in their origin. The scientist in question claims that the spontaneous ignition of damp hay is due to the presence of a microbe which grows and fattens on the wet hay until he gets apoplectic and then bursts into flame. It is lucky the microbe is not "catching."

Secretary Wilson of the Agricultural Department is very sanguine of the agricultural future of the Philippines, and has sent a commission of young men to "spy out the land." There isn't much chance for wheat, rye, oats and barley culture there, he thinks, but there is hope for corn. Meantime the agricultural papers and farmers' association are beseeching Mr. Secretary Wilson to "Please don't." They, of course, expect the Filipinos to "raise Cain," strictly for home consumption, however, but that's about all the farmer really cares to have them raise as a regular crop.

The story comes from Louisville that one John W. Scott "will devote his time to the formation of a trust among spring wheat farmers." His plan is to take in the "big elevator men" in the Northwest, pay the farmers a fixed price for wheat and take the millers by the throat and hold them until they cough up "good prices for supplies." He has "not decided where the underwriting will be done." It is to be hoped Mr. Scott is in possession of a mortgage on a larger section of eternity than

falls to the common mortal, for he needs lots of time to devote to any scheme which depends even in part upon farmers "giving their wheat in payment for shares" in such a company.

Even Central Africa has gotten the exposition fever and is said to have held an agricultural fair with exhibits of big horses, fat pumpkins, etc., all under French auspices, of course. This is "taking up the white man's burden," early—civilizing the wilderness, and all that sort of thing. Next we'll hear that the cake walk has supplanted the danse du ventre in fashionable Central African Midway circles; then what?

The Legislature of Washington has killed a bill fixing maximum railway rates within that state. It is, perhaps, just as well, since recent decisions by the U. S. Supreme Court on the tariffs fixed by state law and state commissioners are not encouraging to that sort of legislation. The attempt in Washington to make a law that will stick, forcing state railroads to exchange traffic at junction points, is more to the purpose.

The American Cereal Co., which was to be the title of the oatmeal trust, definitely called the deal off and the "octopus" will unclasp its tentacles on the twenty-two plants that it was getting ready to swallow. The public did not seem to take a kindly interest in the \$33,000,000 stock, and so the 10,000-barrel oatmeal mill at Chicago with its mammoth terminal elevator with lines of country feeders will remain an iridescent dream for the present.

Canal Commissioner Ryan of the Illinois and Michigan Canal, basking in the magnetic mud of the Indiana Mineral Springs, sees visions of a trolley road paralleling that canal and supplying power to propel boats "at an economical" figure. Which reminds one of the first item of the famous recipe for fricasseeing a hare: "First get the hare." Canal boats on the I. and M. Canal, other than Joliet stone boats, are "tolable skurce" nowadays, the more's the pity.

Joel Benton, who is shrewd enough to be of the family of "Old Bullion," says: "It is not, perhaps, an exaggeration to say that every thousand of circulation in a trade paper is worth to any advertiser in the trade concerned any ten thousand or more of circulation in a paper addressing the general public. The truth is, in the trade paper the advertiser offering something special to the trade represented has his 'game,' so to speak, directly before him. Every shot he sends forth hits the exact mark."

Edward Kimball, the famous raiser of church debts, has turned his attention to raising wheat, or rather, to a method of saving wheat. He tells of a farmer who once had his wheat apparently destroyed by cold weather, just as much of it is believed to be this year. This farmer took an ordinary farm roller and when the soil was somewhat thawed rolled the wheat back into the ground. His neighbors laughed at him, but just the same he reaped 32 bushels per acre, while his neighbors got nothing but the satisfaction of having had a laugh at his expense before the value of his idea was demonstrated.

## THE LEGAL STATUS OF INSPECTION GRADINGS.

A United States court at Kansas City on March 4 rendered a decision which fixes the status of the grain inspector's official gradings, the decision being to the effect that a commission firm may properly sell grain consigned to it on the grade given it by the state grain inspector, although such grading may be different from the original contract.

The case was that of L. Sheiber of Otis, Kan., who contracted with the Andrews Grain Company of Kansas City to sell them 15,000 bushels No. 2 wheat. When the grain was received the inspector graded it No. 3. Meantime when Sheiber shipped he attached a draft to his bill of lading for the proceeds at the market price, which draft was paid. The wheat grading No. 3 instead of No. 2, the Andrews Company sued Sheiber for the difference; and the court, as we have seen, gave judgment against Sheiber.

This ruling, that a commission house is legally justified in selling consigned grain as graded by an authorized inspector regardless of the grading of the shipper or of persons unauthorized by law to grade grain, is of course a logical sequence of the inspection laws, the state grain inspector being in fact the official umpire, so to say, between the parties to a contract of this kind and the grading rules established by the state and publicly recognized by the trade as the standard to which both parties must comply in their trade, the one being required to tender and the other to receive grain of the official grade named in the contract. Nothing could be simpler or more equitable.

## RAILROAD RATE DISCRIMINATION.

Whatever Mr. Geo. R. Blanchard says of railway problems has the merit of expert testimony. His point of view is, of course, that of the railroads; but his position as commissioner of the Joint Traffic Association, which the supreme court lately declared an unlawful combination, gave him notable opportunity to study railway questions in the most thorough manner. Consequently his views are always valuable and his remarks at a recent gathering of merchants and travelers in this city are a really valuable contribution to the subject of railroad regulation.

Mr. Blanchard acknowledges the evils of the present situation with rate discrimination against localities and individuals and illegal rebates to favored shippers. He makes a plea for the complexity of the problem of rates to different localities and places too much stress, perhaps, on the temptations which wicked shippers place in way of innocent traffic officials. He certainly omits to mention the fact that traffic officials who don't get the traffic from the shippers get the bounce from their employers. But the interesting portion of Mr. Blanchard's remarks is not the statement of the difficulties of the situation, but what he conceives to be the remedies to be applied.

Assuming that both railways and shippers will approach the subject in a spirit of fairness, he believes a national classification is both practicable and desirable. He believes further that



rates should be adhered to with the same tenacity as a tariff, postage rates or any other charge made by the government. They should be absolutely inflexible and impartial. Further, he thinks pools should be permitted, which, like all other matters relating to rates, should be under the control of a national railroad commission, backed by reasonable transportation laws.

Mr. Blanchard's program is substantially that of the Interstate Commerce Commission. Evidently he despairs of a settlement of railway problems without the interposition of the government's strong arm. And Mr. Blanchard will find many among the shippers who agree with him.

The railroads' classification committee has announced three classes of minimum carloads. The new minimum of 30,000 pounds has been retained, but after March 31 it will apply only to cars of 60,000 pounds' actual capacity; while as long as any of the so-called "short cars" shall remain in the service they will be loaded on a minimum basis of 20,000 and 24,000 pounds. Is it not pertinent here to inquire when the trade down east intends to make some definite effort to abolish the "carload" as a measure of quantity in a contract?

From the number of letters reaching this office complaining of the behavior of certain Texas receivers of Kansas grain and flour, we are inclined to think the really admirable grain dealers' association of Texas (who are shippers rather than receivers) should look up the character of the said receivers of Texas and call those down who need it, on behalf of the good name of the trade in that state. The fact is that a few receivers of Texas, during the past year or two, have been earning for themselves and that state a very unsavory reputation among Kansas shippers in particular, who, unless a change is made soon, will be obliged to give up doing business in Texas on current basis.

The seed trade has been watching with no little interest the performance going on at Washington in relation to the seed bean and sweet corn contract. One A. C. Nellis contracted with the Department of Agriculture to supply seed beans and seed sweet corn for the annual donation to congressmen at \$1.50 and 85 cents per bushel respectively. At the present time, however, seed beans are worth \$7 a bushel and seed sweet corn \$2.50, and Mr. Nellis, who is caught in the pinch, tells the department neither kind of seed can be had at any price, but the American Seed Trade Association, of which Mr. Nellis is not a member, tells the department that the seed can be supplied, but that the contractor will have to pay their price. Just what the department will do remains to be seen, but it is certain neither the contractor nor the department will get any favors from the Seed Trade Association, which is unalterably opposed from every standpoint to the government's annual distribution of seeds, for obvious reasons.

Chas. F. Johnson, of Johnson & Young, broomcorn brokers at Casey, Ill., has leased 300 acres of land in each of the counties of Hunt, McLennan and Brazoria on which he announces he intends to grow broomcorn.

## Trade Notes

The Link Belt Machinery Company of Chicago has increased its capital stock to \$375,000 from \$250,000.

The Charter Gas Engine Co., Sterling, Ill., reports having orders for engines on their books from Georgia to California.

The Barnett & Record Co. of Minneapolis, has secured the contract for building some 500 feet of dock at Superior, Wis., to accommodate 50 coal pockets.

Chicago makers and dealers in grain handling machinery are making preparations for a heavy business a little later on. All the indications are that they will not be disappointed.

The contract for the new Consolidated Elevator at Duluth has been let to the Barnett & Record Company of Minneapolis. It will be situated near Elevator E, and will be 300x90 feet in size, holding 700,000 bushels.

A very complete and convenient catalogue of nearly 200 pages has been issued by Skillin & Richards Mfg. Co., Chicago. It covers everything used in an elevator, including gasoline engines. Every dealer should have a copy for reference.

Capt. Chas. G. H. Couvrette, an old lake carrier, has patented a new type of electric grain shovel, to be worked in connection with the floating elevators now in use in Montreal harbor. By the use of this shovel, the inventor claims, grain can be transhipped in less than half the time now required.

Bids have been asked at Philadelphia for the erection of buildings for the exposition of manufactured goods of the United States suitable for export, to be held in that city next September, October and November, under the auspices of the Philadelphia Commercial Museum and the Franklin Institute.

P. B. Syders, who for some time past has represented the Prinz & Rau Mfg. Co., has been engaged by the Great Western Mfg. Co. of Leavenworth, Kan., to represent them in the territory west of that city. Mr. Syders is well known in that section and will no doubt have the pleasure of doing business with many old friends as well as numerous new ones.

The H. W. Caldwell & Son Co. have purchased 24 lots on West Eighteenth, Chicago, adjoining 8 lots purchased by them a short time ago. These lots are near Western avenue and the Panhandle and the Union Stock Yards Transit Co. tracks, and afford a fine site on which the company will doubtless, in due time, erect a commodious factory to accommodate their increasing business.

The Nurdyke & Marmon Co., Indianapolis, Ind., has issued a new catalogue which in addition to its completeness is of such typographical beauty and artiseness that it must be seen to be appreciated. While prepared primarily for the milling trade, its large line of elevator supplies, feed mills, etc., will make it of value to every purchaser of goods of this character. Their vest pocket price list, which has become a general favorite, will soon be ready for mailing.

The New Era Iron Works Co. of Dayton, Ohio, report an unusual demand for the New Era Gas and Gasoline Engines, especially in the large sizes. They build engines on order only, and have now in process of erection in their shops one 125 horse power, one 80 horse power, two 60 horse power, two 50 horse power, two 40 horse power, besides a large number of smaller sizes. They enjoy the distinction of building the largest single cylinder gas engine in the United States, and are over sixty days behind their orders.

The Dodge Manufacturing Co. of Mishawaka, Ind., recently furnished, on very short notice, a large flywheel, to go in the Deering Harvester Co.'s plant, at Fullerton Street and Clybourn Avenue, Chicago. The new wheel took the place of one which exploded on January 16. It is 18 feet in diameter, with a 47-inch face, weighs 42,000 pounds,

and was built to transmit 650 horse power. The wheel went on a 25x48 E. P. Allis Corliss Engine, and was finished by the Dodge company and placed on the engine ready for operation within two weeks after they received the order.

The Invincible Grain Cleaner Co. of Silver Creek, N. Y., has, up to this time in 1899, received double the number of orders booked in the same period in 1898. The influx of new business has been, in fact, so great that an enlargement of the plant is now under contemplation. Inquiries also are very brisk. Among late orders was one from a western grain firm, which is believed to have been the largest order for grain cleaning machinery placed during the year, being a second repeat order. Indeed, the outlook for 1899 is so fine that it is certain the Invincible machines are forcing themselves to the front strictly on their merits.

The Dodge Manufacturing Co. report excellent business conditions throughout the country. Their various branch stores in New York, Boston, Chicago, etc., are extremely busy, and the factory at Mishawaka, Ind., which now includes an addition, 300x80 feet in size, is in operation day and night. The addition mentioned was erected during the closing months of 1898, and is completely equipped with machinery. It has greatly enlarged the facilities of the Dodge Manufacturing Co., which will this year continue to live up to its well-earned reputation of furnishing goods within specified time, in spite of the largely increased demand made upon the productive capacity of the company.

The Jefferson County Journal of Adams, N. Y., dated February 28, contains the following interesting description of a unique water wheel now being manufactured by the well-known makers of the Salem Elevator Buckets: A wonderful waterwheel, but not like many of the wonderful waterwheels once on paper then disappearing forever. The above water motor had been smoldering in the dark for more than six years before it was patented, the inventor holding to the same principle, positively knowing the only true method of taking power from water is by making every pound used to pull its full weight on the belt. This is accomplished by an endless chain of buckets receiving the water into the buckets at the top as they pass by the spout and never losing one ounce of the water until the buckets reach the bottom of the wheel discharging all the water from each bucket by turning bottom side up on its revolution for the top, there to be filled again. One of these wheels has been running for more than four years and is so ingeniously constructed it does not wear any more than any other machine. For this invention large sums of money have been offered and as many times refused. The inventor has now entered into an agreement with The W. J. Clark Co. of Salem, Ohio, a very wealthy and much advertised company, to manufacture and place the wheels on the market. And after making new patterns, differing slightly from the original, changing curves and slopes of buckets, otherwise simplifying construction, using all steel and brass, the first new wheel gotten out by them can be seen running at Mannsville any day in O. J. Woodard's mill, giving more power by 25 per cent for the same water used than any turbine wheel ever made.

Farmers are beginning to talk of the scarcity of good seed corn.

The Orange Judd Farmer estimates the 1898 flaxseed crop at 17,217,000 bushels, which is high-water mark.

In Duluth the Consolidated Elevator handled the most wheat, rye and oats in 1898; the Great Northern the most corn; the Terminal the most flax and barley.

The federal court at Kansas City recently decided that grain speculators are liable for balances on margins due commission men after deals are closed.

Duluth has been developing this winter as a corn market, the receipts for January and February having been 2,854,931 bushels, or within 488,070 bushels of the total receipts (3,343,001) for 1898, the biggest corn year on record of that market.



## RANGE OF PRICES AT CHICAGO

The daily range of prices for cash grain at Chicago for the month ending with Mar. 12 has been as follows:

February.	No. 2* R.W. WHT.		No. 1 P. WHT.		No. 2 CORN.		No. 2 OATS.		No. 2 RYE.		No. 1 N.W. FLAXSEED	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
12												
13												
14	72	74			35 1/2	36	30 1/2	30 1/2			120 1/2	120 1/2
15					34 1/2	35 1/2	28	28 1/2	55 1/2	55 1/2	120 1/2	120 1/2
16					35 1/2	35 1/2					120	120
17	73 1/2	74			34 1/2	35 1/2	27 1/2	27 1/2	56	56	119 1/2	119 1/2
18	71 1/2	71 1/2	70 1/2	70 1/2	34 1/2	35 1/2	27 1/2	27 1/2			119 1/2	119 1/2
19					34 1/2	34 1/2	26 1/2	27 1/2	55 1/2	55 1/2	119 1/2	119 1/2
20	71	73			33 1/2	34 1/2	27	27			119 1/2	119 1/2
21					33 1/2	34 1/2						
22												
23	72	72	72 1/2	72 1/2	34 1/2	35 1/2					119 1/2	119 1/2
24	73	73	71 1/2	71 1/2	34 1/2	35 1/2	27 1/2	27 1/2	54 1/2	54 1/2	118 1/2	118 1/2
25	73	73 1/2			35	35 1/2	27 1/2	27 1/2	56 1/2	56 1/2	118 1/2	118 1/2
26												
27	73 1/2	73 1/2			34 1/2	35 1/2	27 1/2	27 1/2	55	55	118	118 1/2
28			72 1/2	72 1/2	35 1/2	36 1/2	27 1/2	27 1/2			118	118 1/2
29												
30												
31												
Mar.—												
1			72 1/2	72 1/2	36	36	28	28 1/2	56 1/2	56 1/2	118	118 1/2
2			72 1/2	72 1/2	71 1/2	71 1/2	33 1/2	33 1/2	27 1/2	27 1/2	55 1/2	55 1/2
3			73	73					27 1/2	27 1/2		
4			73	73	71 1/2	71 1/2	35 1/2	35 1/2	27 1/2	27 1/2	118 1/2	118 1/2
5												
6			72	72 1/2			35	35	27 1/2	27 1/2	118 1/2	118 1/2
7			72	72			34 1/2	34 1/2	27 1/2	27 1/2	119	119
8			71 1/2				34 1/2	34 1/2	27 1/2	27 1/2	119	119
9			71	71			34 1/2	34 1/2	27 1/2	27 1/2	119 1/2	119 1/2
10					69 1/2	69 1/2	35	35	27 1/2	27 1/2		
11			68	68					26 1/2	27 1/2	120 1/2	120 1/2
12												

\* Free on board, switched and delivered.  
† Holiday.

During the week ending February 17, Prime Contract Timothy Seed sold at \$2.42 1/2 @ 2.45 per cental; Prime Contract Clover Seed at \$6.50; Hungarian at \$0.55 @ 0.70; German Millet at \$0.75 @ 1.25; buckwheat at \$0.75 @ 1.25 per 100 pounds.

During the week ending February 24, Prime Contract Timothy Seed sold at \$2.45 @ 2.47 1/2 per cental; Prime Contract Clover Seed at \$6.10 @ 6.35; Hungarian at \$0.55 @ 0.85; German Millet at \$0.75 @ 1.25; buckwheat at \$0.75 @ 1.25 per 100 pounds.

During the week ending March 3, Prime Contract Timothy Seed sold at \$2.42 1/2 @ 2.47 1/2 per cental; Prime Contract Clover Seed at \$6.10; Hungarian at \$0.50 @ 0.85; German Millet at \$0.75 @ 1.25; buckwheat at \$0.75 @ 1.25 per 100 pounds.

During the week ending March 10, Prime Contract Timothy Seed sold at \$2.40 per cental; Prime Contract Clover Seed at \$6.10; Hungarian at \$0.50 @ 0.75; German Millet at \$0.75 @ 1.25; buckwheat at \$0.75 @ 1.25 per 100 pounds.

## FLAXSEED AT CHICAGO.

The receipts and shipments of flaxseed at Chicago during the 19 months ending with February as reported by S. H. Stevens, flaxseed inspector of the Board of Trade, were as follows:

Months.	Receipts.		Shipments.	
	1898-99.	1897-98.	1898-99.	1897-98.
August	665,420	813,160	978,790	299,108
September	1,212,780	696,000	729,806	557,895
October	1,140,280	424,560	572,650	373,312
November	769,210	671,870	309,824	437,218
December	423,980	436,648	281,720	486,379
January	313,200	189,680	231,619	162,128
February	180,960	180,960	107,220	88,523
March		212,331		136,961
April		75,400		37,691
May		333,420		174,522
June		224,143		251,184
July		91,640		197,934
Total bushels	4,703,830	4,349,212	3,511,629	3,123,863

Breadstuffs exports for February (\$20,873,773) were about \$1,000,000 under February, 1898.

Duluth elevators are full, but only a little grain is afloat, owing to ice in the harbor, which makes it impossible to move vessels to the elevators for loading.

The present annual production of grain in Siberia is estimated at 160,000,000 pood (of 36 pounds), which with the present population would leave considerable margin for export. It is believed, however, that the mineral and not the agricultural wealth of Siberia will be first developed by the new railroad, which will bring coal and iron into prominence. By a preliminary examination undertaken along the line, coal has been found in 54 places, copper in 40 places, gold in 20 places, iron in 15 places, in addition to silver, lead, graphite, etc. Salt has already for several years been an important article in Siberia, and will no doubt become much more so. The immigration into Siberia is increasing at a great rate; from 1860 to 1890 only about 300,000 persons emigrated to Siberia, from 1890 to 1895 the total amounted to 425,000 persons, and for the year 1896 alone to no less than 199,000 persons.

## RECEIPTS AND SHIPMENTS.

Following are the receipts and shipments of grain, etc. at leading receiving and shipping points in the United States for the month of February, 1899:

**BUFFALO**—Reported by Chas. H. Keep, secretary of the Merchants' Exchange:

Articles.	Receipts.		Shipments.	
	1899.	1898.	1899.	1898.
Wheat, bushels			1,345,000	
Corn, bushels			756,000	
Oats, bushels			272,000	
Barley, bushels			212,000	
Rye, bushels			333,000	
Flaxseed, lb.				
Flour, barrels				

\* Shipments by railroad.

**CHICAGO**—Reported by George F. Stone, secretary of the Board of Trade:

Articles.	Receipts.		Shipments.	
	1899.	1898.	1899.	1898.
Wheat, bushels	1,823,375	1,093,265	431,125	1,295,157
Corn, bushels	13,316,306	10,314,546	4,950,611	4,643,644
Oats, bushels	8,220,089	7,174,850	4,479,452	4,864,463
Barley, bushels	1,116,852	1,141,572	333,392	496,633
Rye, bushels	266,005	190,950	106,507	22,911
Timothy Seed, lb.	4,634,268	4,465,600	4,361,013	5,359,015
Clover Seed, lb.	950,224	893,708	1,500,549	1,844,285
Other Grass Seed, lb.	1,292,890	884,436	572,933	853,151
Flaxseed, bushels	182,435	195,455	49,003	44,808
Broom Corn, lb.	182,725	579,203	464,983	366,303
Hay, tons	15,563	15,139	1,145	727
Flour, barrels	379,333	320,841	304,388	321,286

**CLEVELAND**—Reported by F. A. Scott, secretary of the Chamber of Commerce:

Articles.	Receipts.		Shipments.	
	1899.	1898.	1899.	1898.
Wheat, bushels	113,217	224,939	138,810	142,119
Corn, bushels	659,722	1,363,591	245,408	845,199
Oats, bushels	449,007	528,939	147,707	351,081
Barley, bushels	7,099	80,603	97,048	
Rye and other cereals, bu.	538	20,722		
Baled Hay, tons	8,738	3,060	4,865	55
Flour, barrels	3,295	7,420	2,374	1,779

**CINCINNATI**—Reported by C. B. Murray, superintendent of the Chamber of Commerce:

Articles.	Receipts.		Shipments.	
	1899.	1898.	1899.	1898.
Wheat, bushels	128,350	93,599	74,650	40,593
Corn, bushels	387,504	365,236	65,938	75,821
Oats, bushels	334,699	189,528	91,182	69,860
Barley, bushels	105,905	111,540	2,962	3,500
Rye, bushels	41,942	65,094	12,778	27,577
Timothy Seed, bags	755	3,494	3,316	4,618
Clover Seed, bags	4,628	8,084	4,814	4,823
Other Grass Seed, bags	4,194	3,735	3,330	4,932
Hay, tons	8,610	12,014	6,483	8,476
Flour, barrels	145,600	199,335	114,235	165,386

**DETROIT**—Reported by F. W. Waring, secretary of the Board of Trade:

Articles.	Receipts.		Shipments.	
	1899.	1898.	1899.	1898.
Wheat, bushels	266,401	262,502	123,681	130,530
Corn, bushels	302,357	295,041	172,863	231,692
Oats, bushels	73,567	194,067		12,574
Barley, bushels	29,430	183,902	35,469	
Rye, bushels	21,336	30,193	17,863	37,281
Hay, tons	12,150	25,875	12,800	21,250
Flour, barrels				

**DULUTH**—Reported by S. A. Kemp, secretary of the Board of Trade:

Articles.	Receipts.		Shipments.	
	1899.	1898.	1899.	1898.
Wheat, bushels	2,673,147	945,911	121,124	82,938
Corn, bushels	1,721,916	486,884	5,071	
Oats, bushels	804,800	828,185	20,457	8,927
Barley, bushels	67,202	34,514	31,361	41,608
Rye, bushels	85,011	111,110		3,352
Flaxseed, bushels	77,752	35,917	787	46,449
Flour, barrels			99,460	125,325
Flour production, bbls.	107,110	120,200		

**KANSAS CITY**—Reported by E. D. Bigelow, secretary of the Board of Trade:

Articles.	Receipts.		Shipments.	
	1899.	1898.	1899.	1898.
Wheat, bushels	1,291,550	1,855,750	1,209,650	995,800
Corn, bushels	616,500	2,091,750	273,000	1,155,750
Oats, bushels	222,000	259,000	167,000	142,000
Barley, bushels	2,400	5,600	2,400	
Rye, bushels	12,350	13,000	12,350	16,900
Flaxseed, bushels	5,500	5,000	3,500	
Hay, tons	7,260	8,180	1,660	1,980
Flour, barrels			26,760	28,800

**MINNEAPOLIS**—Reported by G. D. Rogers, secretary of the Chamber of Commerce:

Articles.	Receipts.		Shipments.	
	1899.	1898.	1899.	1898.
Wheat, bushels	5,035,660	4,844,540	651,010	791,360
Corn, bushels	1,468,120	378,050	643,890	133,100
Oats, bushels	1,542,220	758,580	679,350	803,960
Barley, bushels	93,540	132,940	75,920	20,620
Rye, bushels	47,670	53,640	42,440	59,850
Flaxseed, bushels	124,750	52,030	27,570	17,780
Hay, tons	1,153	1,376	30	30
Flour, barrels	23,788	21,048	1,142,170	925,693

**MILWAUKEE**—Reported by Wm. J. Langson, secretary of the Chamber of Commerce:

Articles.	Receipts.		Shipments.	
	1899.	1898.	1899.	1898.
Wheat, bushels	688,600	719,550	169,855	145,390
Corn, bushels	582,700	474,500	82,887	16,408
Oats, bushels	1,011,600	783,000	668,259	732,432
Barley, bushels	563,550	694,400	256,549	362,742
Rye, bushels	151,200	154,800	88,733	5,335
Timothy Seed, lbs.	260,683	30,000	24,000	199,450
Clover Seed, lbs.	239,890	119,670	830,310	182,070
Flaxseed, bushels	13,920	4,235	9,860	2,320
Hay, tons	1,260	1,203	60	
Flour, barrels	201,760	336,140	203,593	313,555

**ST. LOUIS**—Reported by Geo. H. Morgan, secretary of the Merchants' Exchange:

Wheat, bushels	452,900	325,500	394,591	674,043
Corn, bushels	1,586,250	2,739,750	521,940	2,290,063
Oats, bushels	894,000	768,000	243,086	418,993
Barley, bushels	65,250	169,500	3,710	10,555
Rye, bushels	21,700	132,300	28,380	120,710
Wheat, sacks				
Hay, tons	14,555	11,995	4,754	3,347
Flour, barrels	107,715	106,350	124,406	114,197



# ELEVATOR

## GRAIN NEWS

### IOWA.

An elevator may be built at Stanhope, Iowa, this summer.

West Wilson is preparing to erect an elevator at Traer, Iowa.

F. M. Cooney has sold out his grain business at Anthon, Iowa.

The Northern Grain Co. will build more cribs at Renwick, Iowa.

C. Sargler Druce is buying grain and live stock at Argyle, Iowa.

The building of an elevator at Wellsburg, Iowa, is being talked of.

The elevator which was burned at Newburg, Iowa, is now being rebuilt.

The Robinson Elevators at Hedrick, Iowa, have been traded to C. Stevens of Garner.

E. D. Vorhes has sold his elevator at Cushing, Iowa, and is seeking a new location.

A. Grant of Wall Lake, Iowa, has renewed his lease of the elevator for another year.

E. H. Mason has succeeded Mason & Manatt in the grain business at Carnforth, Iowa.

John Higgenbotham has sold his interest in the elevator at Bayard, Iowa, to McDonald & Co.

Wm. C. Oakland of Carson, Iowa, has purchased and taken charge of the South Branch Elevator.

James O'Dell contemplates erecting an elevator at Shenandoah, Iowa, during the coming summer.

W. L. Koon & Co. have completed changes in their elevator at Sloan, Iowa, which largely increases its capacity.

J. S. Williams has sold his elevator business at Stanhope, Iowa, to James McFarland, who will take possession on April 1.

W. A. Burkey and J. H. Stuckey have purchased E. E. Noe's elevator and coal business at State Center, Iowa. They took possession on March 1.

The recently formed grain firm of Lee & Lehan at Dunlap, Iowa, has been dissolved and is succeeded by the Lehan Grain Co. They inform us that Mr. Lee is going to Nebraska to attend to his business interests there.

### ILLINOIS.

Fred Plate of Polo, Ill., will build an elevator at Haldane.

Wm. Field & Co. are building an elevator at Maunie, Ill.

M. P. Harris is now operating the Prestegard Elevator at Lee, Ill.

David Dowell has purchased the Ensley Elevator at Atterbury, Ill.

A gasoline engine has been placed in the elevator at Pearl City, Ill.

Snider Bros. will build a good-sized elevator at Metamora, Ill., this spring.

The Daniel Ringle Elevator at Rochelle, Ill., has been sold to Charles Cooper.

E. W. Bishopp is about to build a grain elevator near his mill at Watseka, Ill.

D. W. Slauter has placed a new Fairbanks Scale in his elevator at Auboy, Ill.

The F. M. B. A. Elevator at St. Jacob, Ill., has been leased to Geo. Hoeffman.

The Christlieb Elevator at Mansfield, Ill., is now being operated by R. E. Howe.

Blair & Downey recently placed a gasoline engine in their elevator at Adeline, Ill.

E. H. Ware of Douglas, Ill., has sold his elevator to M. W. Thomson of Yates City.

N. E. Brean of Kirkland has purchased Kennedy Bros' grain business at Esmond, Ill.

Harvey Messer has embarked in the grain business at Kappa, Ill., with J. B. Drake.

B. F. Swartz of Urbana, Ill., is now buying grain in connection with his other business.

Ream's Elevator at Lostant, Ill., is now handling grain rapidly with its new gasoline engine.

E. R. Ulrich & Sons of Springfield have purchased R. P. Wood's elevator at Normal, Ill., and will make some needed improvements to the plant.

Mr. Wood will continue to attend to the business for the new owners.

Geo. J. Thorp of Guelph recently purchased the grain elevator and warehouse at Rockwood, Ill.

Sharp Bros. of Congerville, Ill., contemplate rebuilding their burned elevator in the near future.

The Farmers' Grain Elevator Co. of North Henderson, Ill., has dissolved and surrendered its charter.

Mr. Boulware of Foosland, Ill., expects soon to build an elevator at McNulta, just west of Foosland.

Peter Reyland and Joseph Luly of Alton, Ill., are to build a grain and produce elevator at Alton, Ill.

H. N. Dickinson has succeeded Geo. S. Hilton in the grain and general store business at New Lenox, Ill.

M. R. Meents of Ashkum, Ill., contemplates the erection of a 50,000-bushel grain elevator there this spring.

Bartlett & Co.'s elevator at Eleanor, Ill., has made slow progress in construction, owing to unfavorable weather.

J. S. Francis has purchased the interest of his partner, F. M. Allen, in the grain and coal business at Forrest, Ill.

Geo. Heidenrich, who recently purchased the elevator and feed mill at Woodbine, Ill., took possession on March 1.

Bocock & Wrigley of Princeton have disposed of their lease of the Sheldon Elevator to Cramer & Earley, Sterling, Ill.

C. H. Sells has moved to Rankin, Ill., and will commence work on a new elevator as soon as the weather will permit.

R. J. Riley has traded his elevator at Saunemin, Ill., to F. W. and F. R. Allen. The style of the new firm will be Allen Bros.

C. A. Burks of Bement, Ill., has purchased the Suffern, Hunt & Co. elevator at Pierson, Ill., and will operate it after April 1.

Smith, Hippen & Co. of Pekin, Ill., have purchased the complete outfit of machinery for their new elevator, of the Weller Mfg. Co.

J. O. McConaughy recently leased his elevator at Rochelle, Ill., to a Mr. Church of Chicago, who will embark in the grain and seed business there.

Whipple & Barr's elevator at Caton Farm, Ill., became filled with grain last month so that it was necessary to notify the farmers to cease hauling.

Harry Epps contemplates the building of an elevator soon on the Watson farm, west of Paris, Ill. The L. D. & W. Ry. will put in a sidetrack there.

It is said that the old elevator at Kewanee, Ill., owned by J. H. Dole & Co. of Chicago, is to be reopened soon in charge of A. Tolman of Bishop Hill.

H. H. Leach of Hennepin, Ill., has sold his elevator to Charles Coleman. He will give possession as soon as the river opens so he can dispose of his stock of grain.

Reynolds & Hagy sold their elevator at Wenona, Ill., to F. G. Jones of El Paso, and gave possession March 1. Mr. Jones expects to make his home in Wenona.

The Interior Transfer Elevator Co. of Chicago has been incorporated by Milton Churchill, Geo. A. White and James W. Thomson. The capital stock is \$15,000.

The Churchill-White Grain Co. has awarded a contract to a Kankakee firm for furnishing the stone for foundations for 4 new elevators along the L. I. & I. Railroad.

Geo. W. Helm and John P. Doyle of Longview, Ill., have recently placed in their new elevators there the Champion Corn Sheller made by R. H. McGrath of Lafayette, Ind.

The Jonesboro Mill & Elevator Co. has purchased the Jonesboro Elevator at Jonesboro, Ill., from the E. J. Francis Commission Co. and will take possession about May 1.

Three corn-shelling outfits near Stones, Ill., had to suspend operations last month on account of the elevator there filling up faster than cars could be supplied to empty it.

Frank Ames placed a 16-horse power gasoline engine in his elevator at Varna, Ill., last month. G. A. Sauer of the same place also installed one of 12-horse power in his elevator.

It is probable that R. G. & C. H. Risser will build a new elevator at Bradley, Ill., near the 3-I and I. C. switches, as it is reported that they have sold their present building for other purposes.

The Glucose Sugar Refining Company of Chicago, Ill., has recently increased the total capacity of all its plants to 115,000 bushels of corn daily. The capacities of the plants before the increase were:

Peoria, 31,000 bushels; Chicago, 28,000; Rockford, 17,000; Marshalltown, 15,000; Davenport, 9,000.

The Farmers' Grain & Coal Co. of Mason City, Ill., has incorporated with a capital stock of \$5,000. The incorporators named are Wm. T. Ainsworth, John A. McCreery, Claude L. Stone.

The Middle Division Co. has purchased of the Weller Mfg. Co. of Chicago power transmission machinery, including rope drives and friction clutches, to go in its new elevator at Harvey, Ill.

The Middle Division Elevator Co. has completed a new elevator at Risk, Ill., to take the place of its elevator which was burned some time ago. The Weller Mfg. Co. furnished the machinery equipment.

J. L. Day & Co. of Minneapolis, Minn., have installed their complete dust collecting system in the new grain elevator of Rosenbaum Bros. at Chicago and in H. Mueller & Co.'s new elevator at Chicago.

Thomas Ryan has sold his elevator at Burton View, Ill., to the Middle Division Elevator Co. Mr. Ryan has been in the grain business for 20 years and retires now on account of his health. Frank Schroeder and Sammel Love will manage the house during the coming year.

E. W. Dimond and E. R. Hyndman have purchased the grain elevators at Capron, Ill., from Robert Ridge. Mr. Ridge retires after a business record of 31 years in Capron. During 18 years of this time the firm was Ridge & Andrews. The new firm takes possession April 1.

Chas. B. Johnston having disposed of his grain and banking business at Washburn, Ill., has purchased the Amster, Green & Co. elevator property at Arrowsmith, Ill. He will also deal in lumber. Mr. Johnston has been in the grain trade for 25 years. He will be assisted by his son, W. E. Johnston.

### NORTHWESTERN.

James Farrel Jr. is now buying grain at Klevenville, Wis.

C. E. Murray has reopened the elevator at Coburn, N. D., near Sheldon.

The Omaha Elevator at Washburn, Wis., is undergoing extensive repairs.

The Mandan Mercantile Co. will build a wheat elevator at Dickinson, N. D.

Wesley Carter will probably build a large elevator at St. Cloud, Minn., this year.

The Independent Grain Co. has purchased the Atlas Elevator at Minnetonka, Minn.

Ness & Co.'s elevator at Whalan, Minn., was sold at trustee's sale recently for \$2,300.

R. Hutchinson is agitating the building of a Farmers' Elevator at Georgetown, Minn.

The Van Osdel & Frick Elevator at Mission Hill, S. D., is about ready for the reception of grain.

It is believed by many that the much-talked-of Great Northern Elevator will be built at Superior this year.

It is reported that there are good prospects of a farmers' elevator being built at Zumbro Falls, Minn., this season.

The W. W. Cargill Co. of La Crosse is considering a proposition to build an elevator in Oshkosh, Wis., this season.

Lamm Bros. of Glenbeulah, Wis., expect to build a new elevator this spring and use their present one for a warehouse.

The St. Anthony & Dakota Elevator at McIntosh, Minn., is to be remodeled and a gasoline engine substituted for the present horse power.

John Walther and Fred Day have purchased a piece of land at Oconomowoc, Wis., on which, it is stated, they are to build an elevator.

C. S. Douglass of Fontana, Wis., expects to build an elevator and feed establishment as soon as the electric road is completed to that place.

It is reported that the newly-organized Bay State Milling Co. of Winona, Minn., will build five steel storage tanks for grain, each having a capacity for 30,000 bushels.

The Farmers' Milling & Grain Co. of Milnor, N. D., which has been incorporated with a capital of \$15,000, expects to build a mill and elevator at Delamere this spring.

It is reported that the Phoenix Elevator Co. of Milwaukee has decided not to rebuild its elevator at Hartland, Wis., and that efforts are being made there to organize a local stock company for this purpose.

E. S. Woodworth & Co. of Minneapolis, Minn., will rebuild their elevator in that city, which was burned January 9. It will have a capacity of 100,000 bushels, twice that of the old elevator, and will be equipped with every modern appliance to handle



damaged and off-grade grain. Tromanhauser Bros. have the contract.

Nye, Jenks & Co. have installed a Day Dust Collecting System in the Rialto Elevator, which they operate under lease, at Milwaukee, Wis.

It is reported that the Farmers' Elevator at Frankfort, S. D., purchased 100,000 bushels of wheat this season up to the middle of February. E. Beynon is manager of this house.

The business men and farmers of Fergus Falls, Minn., have organized a Grain Growers' Association. H. E. Boen was elected president and T. C. Hodgson of Elbow Lake secretary.

Hiebert Bros. have purchased the Johns & Powers elevator at Mountain Lake, Minn., and it is stated that they will build a steel elevator on the site of the one which recently burned.

The Stockholders of the Grain Palace Association of Aberdeen, S. D., held a meeting last month and elected officers for the ensuing year. They also recommended that the usual exposition be held this year.

Many of the large elevators at Duluth are already full and the prospects are that before the opening of navigation there will be a positive shortage of storage facilities that will prove vexatious to all concerned.

Julius Kuehn of Kaukauna, Wis., recently purchased Charles Jacobson's flour and feed business, and intends early this spring to build a 10,000-bushel elevator and feed mill, to be operated by a gasoline engine.

The Farmers' Elevator Company of Sauk Center, Minn., has purchased the Monarch Elevator at that place and commenced buying on March 9. E. D. Phelps, formerly with the M. & N. Elevator Co., has been engaged as buyer.

The Minnesota & Northern Elevator Co. has been making improvements in its house at Bathgate, N. D. The capacity will be increased 5,000 bushels and an Otto Gasoline Engine substituted for the present steam engine. Wm. Steele is the local manager.

A meeting was held at Albany, Minn., last month and the Stearns County National Farmers' Alliance and Industrial Union was organized. It was decided to organize an Alliance in each township of the county, and to build elevators at Albany, Freeport, Sauk Center and West Union.

The executive committee and a few members of the Grain Growers' Association met at St. Paul, Minn., the other day and decided to go before the legislature and ask that the original site for a state elevator at Duluth be turned over to the association, and the \$60,000 for this purpose, which has been lying idle, also be given to the association for elevator purposes. It was also decided to organize another association, to be known as the Farmers' Elevator Association, which will file articles of incorporation within a few days. The officers for the first year were named as follows: H. E. Boen, Fergus Falls, president; C. H. Hopkins, Fairfax, vice-president, and A. F. Borchert, Bird Island, secretary. The local elevator associations all over the state are to have according to the plan, shares in the terminal elevator. The shares will be sold at \$25 each. The proposed league elevator at Duluth is contingent upon the action of the legislature.

#### CENTRAL.

Armstrong & Sons of Clifton, Ohio, are building a new elevator.

Leathers & Frager have sold their elevator at Midlepoint, Ohio.

Myron H. Vaughn has sold out his grain business at Caro, Mich.

Clem Maldrett has sold his grain business at Middleton, Mich.

The new elevator at Greentown, Ind., is about ready for business.

St. Henry, Ohio, expects to have a grain elevator erected there this spring.

The grain firm of Woolman, Kelsey & Co. at Millington, Mich., has dissolved.

Wilson & Gamble have begun work on a new elevator and mill at Warren, Mich.

Van Grundy & Wilson have a new elevator at Rockfield, Ind., about completed.

It is reported that Coleman, Mich., will donate a site for an elevator and grist mill.

J. F. and T. C. Overman contemplate the erection of a modern elevator at Amboy, Ind.

Thos. Stanley of Connorsville, Ind., will soon build an elevator at Lyons Station.

An elevator will be built at New Baltimore, Mich., by a newly organized stock company.

The grain elevator at South Lyon, Mich., which has been tied up for a year by a bank failure, has

been purchased by John McLaren of Plymouth, and placed in operation.

Cruikshank & Clevenger succeeded the Edison Elevator Co. at Edison, Ohio, on March 1.

The Goshen Milling Co., Goshen, Ind., expect to build a large elevator during the summer.

Chas. Sharpe of Cambria, Ind., is now buying grain and expects soon to build an elevator.

The Fairport Warehouse & Elevator Co. has its new warehouse completed at Fairport Harbor, Ohio.

W. H. Dye has traded his elevator at Columbus Grove, Ohio, to Hooper & Son, for a farm near Van Wert.

David Maxwell has moved from Camden to Woodville, Ind., where he will build an elevator and buy grain.

It is reported that parties have secured a piece of ground at Montpelier, Ind., on which to build an elevator.

G. O. Cruikshank and W. L. McElhinney are now the proprietors of the Delaware Elevator at Delaware, Ohio.

John Stewart, who has been buying grain at Manson, Ind., this season, expects soon to build an elevator there.

T. H. Mendenhall has succeeded Mendenhall & Bailey in the grain and general store business at Woodington, Ohio.

Ed. Felts of Chestnut, Ill., has moved to Foster, Ind., and taken charge of the elevator which he recently purchased.

R. H. McGrath of Lafayette, Ind., reports a sale of Champion Corn Shellers for the Wabash Elevator at that place.

Powell & Coonfare on March 1 succeeded the J. W. Jones Co. at Delaware, Ohio, in the ownership of the Radnor Elevator.

P. G. Yoars took possession of the elevator at Amboy, Ind., on March 1, and has installed Henry Dickinson as manager.

T. J. Watkins expects to build an elevator at Gomer, Ohio, on the C. L. & M., which will soon be completed to that place.

G. E. Moore, the miller of Kingman, Ind., has leased W. R. Massey's interest in the elevator there and is buying grain and seeds.

Dukes & Moffitt have sold their elevator at Moffitt Station, Ohio, to Southworth & Co. of Toledo. Guy Davis will continue as manager.

The Walsh Distillery at Lawrenceburg, Ind., is erecting five steel storage tanks for grain with a capacity of 60,000 bushels each.

W. P. Salladay has a new elevator at Ashville, Ohio, about completed. It takes the place of his house that was destroyed by fire.

Thompson Bros., the millers of Brink Haven, Ohio, have arranged to build an elevator at Gambier, Ohio, as soon as the weather will permit.

The receiver of the State Bank of Fenton has sold the Simmonds Elevator at that place to Fred Welch of Deerfield, Mich., for \$3,650.

A large grain drier is being placed in the elevator of the Cleveland Grain Co., Cleveland, Ohio, by the Hess Warming & Ventilating Co. of Chicago.

The elevator at State Line, Ind., did not take in any grain for several days last month owing to the great weight of corn in store interfering with the running of the machinery.

#### EASTERN.

A grain elevator will probably be built at Byfield, Mass.

Roberts & Co. have opened a feed, hay and grain store at Nyack, N. Y.

Asa O. Marshall is building a grain elevator at Beverly Farms, Mass.

The Western Maryland Elevator at New Franklin, Md., is to be enlarged.

W. H. Cunningham has rebuilt his burned grain warehouses at Malden, Mass.

Mr. Ellis has retired from the elevator firm of Atwater & Ellis at Somerset, N. Y.

Belden & Co. of Geneseo, N. Y., have rented J. H. Prettijohn's grain and produce storehouse at Livonia.

T. W. Ransbotham, whose grain establishment and mill were burned at Dalton, Mass., recently, is rebuilding.

Jas. L. Record completed and started on March 1 the new 1,000,000 elevator on the Hoosic Tunnel Docks at Boston, Mass., for the Fitchburg Railroad.

The house is steel tile and concrete and of entire new construction throughout.

The Aldine Roller Mills of Huntington, W. Va., expect to build a grain elevator soon.

I. H. Coryell is building a 24-foot extension to the end of his elevator at Branchport, N. Y.

Judkins & Gilman, the grain and flour merchants of Newport, Me., have made some improvements in their store recently.

Loring Fuller & Co. of South Yarmouth, Mass., have placed an 8-horse power Fairbanks-Morse Gasoline Engine in their grain warehouse.

C. G. Burnham, a grain and flour dealer of Holyoke, Mass., has had plans prepared for a \$12,000 elevator, but has not yet decided definitely whether he will build this year or not.

The National Starch Works at Glen Cove, L. I., are building steel storage tanks having a capacity for 300,000 bushels of grain. It will be equipped throughout with pneumatic handling machinery.

The Morrison Hay, Grain and Feed Supply Co., Morrison, N. Y., has incorporated with a capital of \$5,000. The incorporators are D. G. Smith, T. A. Sinclair, F. D. Kirk, C. C. Crafford and W. C. Burnham.

William Bassett and Walter Little are about to build an elevator at Bridgewater, Mass., and deal in grain, hay, seeds, etc. The proposed building will be 30x130 feet and 65 feet high. They have organized as the Eastern Grain Co., with a capital of \$4,000.

#### SOUTHERN.

E. A. Turner is building a large elevator at Van Alstyne, Texas.

Hiram Southerland has opened a grain and feed store at Wauchula, Fla.

A large elevator will probably be built at Farmersville, Collin Co., Texas, this year.

E. S. Wood & Co. will continue the grain business of E. S. Wood at Houston, Texas.

R. M. Harrel & Co. of Cale, Texas, are preparing to erect a large grain and hay warehouse.

E. G. Beall is rebuilding his large elevator at Van Alstyne, Texas, which was burned recently.

Plans have been prepared for a 1,000,000-bushel elevator at Galveston, Texas, for the Galveston Wharf Co.

It is reported from Hopkinsville, Ky., that the farmers of Christian County expect to organize and build an elevator soon.

The City Grain and Feed Co. of Columbia, Tenn., inform us that they intend building at once a 50,000 to 75,000 bushel elevator, and that they are in the market for the necessary machinery, etc.

The Equity Roller Mills of Owensboro, Ky., inform us that they intend building an elevator this spring, and that they may put in steel tanks, as they are favorably impressed with the superiority of this system of storage.

It is reported that arrangements have been completed to build a large elevator this spring at Midlothian, Ellis Co., Texas, by the Midlothian Grain Co. W. W. Major is manager. The new house will probably be of 75,000 bushels' capacity.

#### MISSOURI, KANSAS AND NEBRASKA.

J. W. Holmquist will build an elevator at Lyons, Neb.

Skaggs & Hatfield are building an elevator at Rome, Kan.

J. S. Stewart has commenced buying grain at Sheridan, Mo.

C. B. Gaunt has sold out his grain business at Simpson, Kan.

P. D. Smith has his large elevator at St. Edward, Neb., completed.

Paul Beck of Crete has purchased Robb & San's elevator and cribs at Wabash, Neb.

Hamel & McCarty of Bronson took charge of the elevator at Moran, Kan., on March 1.

The William Tepe Feed Co. of St. Louis has incorporated with a paid capital of \$5,000, to deal in grain and feed.

It is reported that a 1,500,000 bushel elevator is likely to be built in Kansas City this year by a St. Louis firm.

The Peavey Elevator Co. will, this spring, increase the capacity of its house at Bancroft, Neb., to 75,000 bushels.

Kramer Bros., proprietors of the Aetna Mills, Wellington, Kan., feel the need of considerable more elevator capacity than their present 70,000 bushel house



affords. They will therefore build a 100,000 bushel house in the near future.

Jacks & Madole of Kingman, Kan., have sold their coal and feed business, but continue in the grain buying business.

L. E. Archias & Bros., the seedsmen of Carthage, Mo., recently made extensive additions to the capacity of their plant.

Work was commenced on the first of this month on the new elevator at Petersburg, Neb., for the Trans-Mississippi Grain Co.

A. T. Wyatt has traded his elevator, lumber yard and other property at Butler, Mo., for a ranch in Sheridan County, Kan.

The O. H. Corbin Milling Co. of Liberty, Mo., inform us that they intend to build immediately a 30,000 to 50,000 bushel elevator.

The Merchants' Warehouse & Grain Co. at Kansas City will enlarge its warehouse and elevator soon, increasing the capacity of the latter to 75,000 bushels.

Plans for the distillery to be erected at Kansas City by E. B. Joffe have been approved by the government. It will have a capacity of 2,000 bushels of corn daily.

A stock company has been formed at Elmwood, Neb., known as the Elmwood Mill and Elevator Co. It has a capital of \$6,000, and will operate the mill and elevator there.

C. A. Olsen, manager of the Roberts Elevator at Kennard, Neb., is still awaiting the arrival of a quantity of wheat purchased last month from some strangers and on which he advanced \$10.

C. Lipscomb has resigned his position with J. W. Davis & Co. of Ft. Scott, Kan., and gone into the grain business with others at Liberal, Mo., where the new firm is known as C. Lipscomb & Co.

The S. R. Washer Grain Co. of Atchison, Kan., has incorporated with a capital stock of \$25,000. The incorporators are: S. R. Washer, R. F. Antle, W. S. Washer, and A. S. Antle.

#### WESTERN.

The Dalton Fruit & Produce Co. has been incorporated at San Francisco, to deal in fruit and cereals. The directors are Frank Dalton, W. Mersfelden and B. C. Dalton.

Jacob Rehm of Chicago has sold his two-thirds interest in the Santa Ana Milling Co. to R. M. Baker of Santa Ana, Cal. The company will hereafter be known as the Santa Ana Grain & Milling Co. Its capital is \$15,000.

The Farmers' & Merchants' Grain & Produce Commission Co. of San Francisco, Cal., was incorporated recently by L. B. Harvey, E. H. Lake, B. C. Robertson, J. A. Harvey and Geo. H. Phelps. The authorized capital is \$250,000; subscribed, \$500.

#### CANADA.

A 10,000-bushel elevator will likely be built at Richmond Hill, Ont.

Finlay and C. A. Young have completed elevators at Elgin, Minto and Dunrea, in Manitoba.

The Strathroy Elevator Co., Limited, Strathroy, Ont., has incorporated with a capital of \$2,000.

The Carnduff Farmers' Grain Co. of Carnduff, Assa., has incorporated with a capital of \$6,000.

The old grain elevator at Gananoque, Ont., has been purchased by McBrowns Bros. of Washburn.

Stock to the amount of \$1,500 has been subscribed for at Forest, Ont., for the purpose of building an elevator.

The merchants of Moosomin, Assiniboia, propose to erect this year an elevator for the purpose of attracting trade to that town by offering better prices.

The Grand Trunk Elevator No. 2 at Midland, Ont., will be closed for repairs about the middle of this month. It will probably be reopened about the last of April.

The Northern Elevator Co. has closed its elevator at La Salle, Manitoba, for the season. Considerable wheat in the shape of car lots from large farmers remains to be shipped.

Harry Corby, M. P., who recently purchased the elevator at Belleville, Ont., says he will enlarge it to 500,000 bushels' capacity if arrangements can be made for handling northwestern grain via Midland and Peterboro.

Plans have been completed for the 500,000 bushel elevator, and its power house and conveyors, to be built at St. John, N. B. This house is to be completed by October 1.

Nebraska corn dealers look for decreased shipments for the balance of the season from that state, owing to the unusually large number of cattle being fed.

## IN THE COURTS

C. B. Wandeler, a grain dealer of Sherman, Texas, has sued Byers Bros. for \$20,000 damages, alleging that defendants had written a letter to a third party which damaged his business credit.

Ambrose & Helmer of Hickman, Ill., endeavored to enforce a contract alleged to have been made by Wm. Carey for the sale of grain. The plaintiffs were defeated. No written contract appears to have been in evidence.

John Hays, a grain dealer at Williams, Iowa, has sued the editor of the Dows Advocate for \$5,000 damages. The Advocate had stated that Hays had been tampering with his scales used for weighing farmers' grain.

Rebecca F. Cottrell has begun suit against the Coffeyville Elevator Company of Coffeyville, Kan., asking \$10,000 damages. Her husband was killed November 11, 1897, by being caught in the coils of a rope used for elevating purposes on the premises.

A receiver has been appointed for the Short Risk Grain Company of Minneapolis, on application of Fanny Comlin, owner of one share. The receiver will come into possession of \$4,027, the sum in litigation between E. F. Osborn, president, and the company itself.

In a suit by the state against the Peavey Grain Line Company at Minneapolis for \$8,000 taxes on freight cars, Judge McGee decided in favor of the defendant on technical grounds, holding that the tax had been improperly extended upon the lists. He did not enter into the merits of the tax itself.

The suit of Cleveland Iron Mining Company vs. the Eastern Minnesota Railway Company at Duluth, Minn., was an action by a vessel owner to recover for grain shortage from the elevator loading the grain. The court found that, notwithstanding the presence of an official weighman, a shortage of 2 per cent (in this case) "must be held to be an error either fraudulent or so gross as to imply bad faith or failure on the part of the weighman (empire) to exercise an honest judgment when weighing out." The question of the plaintiff's negligence when receiving the grain on board, thus contributing to the error, was not considered at all.

### COST OF A CORN CROP.

Estimates of the cost of growing corn are always interesting, notwithstanding the self-evident fact to start with that no two estimates will ever agree in their results. The elements entering into cost vary, while the accuracy of the bookkeeping is notoriously an uncertain quantity, so that initial uniformity seldom or never obtains. But as the question is one of direct interest to farmers, these estimates are constantly appearing in the agricultural press, and doubtless will for the future.

The latest of these efforts to arrive at the cost of growing corn is reported by Mr. Frank Ruhlen, of the Ohio State University, to the Orange Judd Farmer, the crop having been made by Mr. Ruhlen himself on eighteen acres of black loam bottom land, in Union County, Ohio. The land was estimated to be worth \$60 per acre, although we find in the tabulation of cost given below no allowance for interest on the capital invested in the land or charge for rent. Mr. Ruhlen's figures with that omission are as follows:

Plowing, 7½ days at \$2.....	\$15.00
Harrowing, 3 days at \$2.....	6.00
Planting, 2 days at \$2.....	4.00
Cultivating 4 times, 7 days at \$2....	14.00
Cutting with harvester, 6 days at \$1..	6.00
Husking and cribbing, by job.....	45.54
	<hr/>
Seed corn, 70 quarts.....	\$ 1.00
Taxes.....	2.48
Estimated cost of board, 26½ days..	7.95
Estimated team maintenance, ditto..	4.90
	<hr/>
Total.....	\$106.87
Less value of fodder.....	20.70
	<hr/>
Net cost, \$4.79 per acre.....	\$ 86.17

The product was 1,138½ bushels, making the net cost 7.6 cents per bushel. The Farmer says: "This is very close to the result which our own tabulation of two years ago gave for Ohio, and in addition it will be noted that the labor was hired by the most expensive method, man and team per day. Mr. Ruhlen furnished the implements used, and allowing \$1 for the cost of the implements and a depreciation of 12½ per cent per annum for wear and tear, his net cash outlay on the crop would be at the rate of 8.7 cents per bushel. The rate of yield was 63¾ bushels per acre. This is about double the average rate for the state so it will further appear that these results are in line with our final state-

ment that corn could not be grown to sell at less than about 18 cents without loss."

## PERSONAL

Samuel Claybaugh recently took charge of the elevator at La Paz, Ind.

Fred Geobel is now buying grain and stock for P. Wiwi at Montrose, Ill.

E. W. Shields, of the Simonds Grain Co., Kansas City, fell recently and broke his arm.

Frank Davis of East Lynn, Ill., is again at his desk in the grain office after a long illness.

Andrew Milligan succeeded S. T. Jackson on March 1 as buyer for Connelman & Co. at Rolfe, Iowa.

Zina R. Carter, late president of the Chicago Board of Trade, is now the Republican nominee for mayor.

L. W. Thompson recently resumed the position of manager of the Anderson Elevator at Lysne, Minn.

J. F. Pinches recently succeeded J. J. Moore as grain buyer at Laurel, Neb., for the Peavey Grain Co.

Geo. E. Marcy, of Armour & Co.'s grain department at Chicago, made a trip to California last month.

O. F. Johnson of Worthington, has taken charge of the Hubbard & Palmer Elevator at Mountain Lake, Minn.

J. M. Maguire has removed from Wilson to Campus, Ill., to take charge of an elevator there which he recently acquired.

T. B. Samuel has moved from Hallsville, Ill., to Boswell, Ind., where he is interested with his son in the grain business.

Edwin Mooers of the Kingston Elevator & Transit Co., Kingston, Ont., visited friends in Duluth and elsewhere in "the States" last month.

Daniel F. Danforth, a Chicago commission man, was seized with a paralytic stroke on the right side while on the exchange floor one day last month.

C. L. Blusing, a prominent flour and cereal merchant of Amsterdam, Holland, visited St. Louis and other points last month to establish agencies for flour, meal, etc., for export.

J. M. Tuttle, a grain dealer of Norwalk, Ohio, fell on an icy sidewalk last month and sustained a fracture of his left hip. The injury is especially serious as Mr. Tuttle is 78 years of age.

### NEW LAKE BILL OF LADING.

The lake carriers were in convention at Buffalo March 7-9 for the purpose of drafting a new form of bill of lading which would, in the first place, shift the responsibility for shortages and also provide for demurrage in case of delay at Buffalo. The committee having the matter in charge recommended the following changes in the bill of lading:

That the grain bill of lading on the lakes be changed by inserting a clause to the effect that when grain is consigned in the care of any person at its destination, unless the original bill of lading is there presented for cancellation, a delivery of the grain to the person in whose care it was consigned shall be a good delivery, exempting the vessel from liability.

With respect to delays in loading, they having occurred before the bill was made (the bill being made when the vessel is loaded), nothing should be placed in the bill of lading relating to delays in loading, but the matter should be left to individual bargain between the charterer of the vessel and the owner.

That the Lake Carriers' Association recommend to agents who make charters of their vessels that the entire cargo should be loaded at not more than two elevators, and if loaded at more than two elevators the shipper should be liable for the extra expenses.

All consignments of grain should be made to individuals and the grain should not be consigned to elevators or railroad companies.

Regarding delays in unloading, the trunk lines east of Buffalo should be given ten days to make known to the secretary of the Lake Carriers' Association what the trunk lines will do in the way of furnishing proper facilities at the port of Buffalo to the lake vessels bringing grain to that port.

No action was taken on the report of the committee; but another meeting will be held about April 1, when the report will be disposed of.

The announcement of the sale of the Keokuk & Western Railroad to the Burlington system has interfered with the plans of the Des Moines Elevator Company, who were getting ready to build an elevator at Des Moines to handle grain for export via Galveston.



# PRESS

## COMMENT

### THE CONDITION OF WHEAT.

From a review of data from the whole field, Orange Judd Farmer believes that the winter wheat crop has suffered seriously already, and when in addition it be remembered that the critical season for the crop, the season of freezing nights and thawing days, is at hand, it will not be unreasonable to expect an unusual accumulation of crop damage claims within the next few weeks.—Orange Judd Farmer.

### PUSH THE PROPAGANDA LEGISLATION.

Every corn grower who feels the pinch of low prices for his product should make it a point to urge his representatives and senators in the legislatures of these states to support these measures. They represent about the only legislation out of which he can hope to get any direct return for the money he pays in taxes each year. The Illinois State Farmers' Institute passed special resolutions endorsing this effort and urging Illinois legislature to make the needed appropriation.—Orange Judd Farmer.

### DID THE PROMOTER TALK TOO MUCH?

Giles W. Brown, president, etc., of the Sioux Milling Company, whose plant was in the cereal mill combination, does not say that another attempt will be made to consolidate the mills, but is emphatic in expressing the opinion that if another movement is made to reorganize the trust it will be gone about more quietly than ever before; that the next time the announcement is made that the consolidation has been effected, it would be after the money was up and consummation was certain.—Sioux City Journal.

### THE VALUE OF THE HAY CROP.

Who would say at first thought, without a knowledge of the actual figures, that the hay crop of this country for 1898 was of greater value than the wheat crop of that year? Yet such is the fact. With the exception of corn, the hay field is the most productive single source of national wealth. The value of the hay crop for 1898 was \$398,060,647, while for the same year our wheat was valued at \$392,770,370. The corn crop brought the greatest returns, its valuation by the agricultural department being \$552,023,428.—Anaconda, Mont., Standard.

### OUR GRAIN EXPORT TRADE.

It could hardly be expected to surpass a year of such exceptional good fortune in commerce as the year 1898, but there is plenty of indication at present that this country has permanently gained a stronger hold on foreign markets than it ever had before, so that ordinary years will surpass the ordinary and the poorest years will surpass the poorest of former times. Meanwhile, a tangible certainty is that the dependence of this country upon foreign manufactures for its supplies has been permanently reduced by the progress of home industries.—New York Tribune.

### THE CEREAL FOOD TRUST.

There are trusts in operation and there are trusts in embryo, but the wickedest and the most reprehensible of all schemes thus far invented to pick the pockets of the people is this effort of a few conscienceless men to force the public to pay higher prices for a food necessity that is already yielding large profits. Cereal food is even a greater necessity to the masses than sugar and coffee. It is an essential diet for millions of children. . . . But notwithstanding these things there are men—"half devil," as Kipling would put it—who are conspiring to gather all the cereal food producing firms into one mighty and soulless company.—Kansas City Times.

### THE TENDENCY OF THE WESTERN GRAIN TRADE.

In the grain trade of the West there is a powerful factor that is taking the business from the grain commission man—the direct purchasing of grain on track in the country by exporting and other large purchasing concerns. All grain so acquired goes direct to the seaboard and in no way passes through the hands of commission merchants. This factor has already cut a big figure in the trade. Will not the action of the commission merchant in severing their best and closest connections with the shippers largely aid in this seeming transformation of methods in the grain trade? Primarily the grain shippers have no concern for the commission man; if the latter seeks always to acquire more distant relationship, can the result be other than disastrous to the receiver? Man's material success depends only on his own actions; if he does unwisely he must suffer the natural consequences. The question may well be asked: Are the grain commission men allowing

themselves to be worked and that largely by their own actions? Only time will tell.—Kansas City Packer.

### THE GERMANS AND COLD CORN BREAD.

The point made by Mr. (ex-secretary of agriculture) Morton that the Germans eat their bread cold is one of importance. This circumstance has probably nearly as much to do with the non-success of the corn-bread propaganda as any natural disinclination of Germans or other Europeans for the products of maize. We find a similar disinclination to corn bread in those sections of the United States where bread is nearly always eaten cold. Even the most enthusiastic lovers of corn bread do not generally relish it very much after it has become cold.—Louisville Courier-Journal.

## CROP REPORTS

[Readers will confer a favor by sending us reports each month of the acreage and condition of growing crops, the amount of grain and hay in farmers' hands and stocks in store, for publication in this department.]

The growing crop in Kansas looks well and a good yield is expected.

Wheat in West Virginia and Maryland was well protected by snow in February, and prospects are good for a 100 per cent crop.

There has been some damage done to wheat in Nebraska by the cold weather, but on an average the crop is reported as being in a good condition.

Frost did considerable damage to the growing wheat in Washington and parts of Oregon the last part of February, the damage being so great in some districts that farmers will replant to spring wheat.

C. A. Burks, Bement, Ill., in a recent communication says: I fear considerable damage has been done the winter wheat. No corn is being offered at prevailing prices, and the farmers seem disposed to hold.

According to reports the first of March the growing wheat in Central Illinois was not seriously injured by the recent cold snap, and it was not expected that the winter killed would be greater than 10 to 12 per cent of the area seeded. With favorable conditions up to the time of harvest a fair average yield may be expected. In the southern section the damage was considerably greater than in the middle division.

According to a report issued by the secretary of the Missouri State Board of Agriculture on February 28, the wheat acreage seeded in the fall of 1898 shows an increase over the previous season of 7 per cent, giving an acreage for the state of 1,106,000 acres. The present condition is placed at 74 per cent of an average crop. The protection afforded by a covering of snow was generally very light, and in some localities during the lowest temperature there was scarcely none.

Winter wheat in Iowa was reported to be seriously injured during the latter part of February by the extremely cold weather and absence of snow covering. In some districts the early sown wheat showed evidences of remaining vitality, but the output of the crop will depend very largely upon the weather conditions during the present month. Reports show from 50 to 100 per cent increase in acreage in many parts of the state, and some increase in all parts of the state. A total of 300,000 acres of winter wheat is reported, against 250,000 acres last year.

MICHIGAN CROP REPORT, March 8.—In answer to the question, "Has wheat during February suffered injury from any cause?" 632 correspondents in the state answer "yes" and 86 "no." In the southern counties 426 answer "yes" and 28 "no," in the central 168 answer "yes" and 13 "no," and in the northern counties 38 answer "yes" and 45 "no." The condition of wheat compared with an average on March 1 was, for the state, 74 per cent. The average condition was, in the southern counties, 74 per cent, in the central counties 71 per cent and in the northern counties 87 per cent. These percentages, to be of value, must be considered in the proper manner. A low average condition now may not mean a short crop; it largely depends on the climatic conditions for the next six weeks whether wheat is damaged badly or not. The figures indicate that the weather for the month has not been such as tends to preserve its vitality, although many correspondents think that much wheat is killed now. The amount of wheat in the farmers' hands, for the state, is 29 per cent of the crop of 1898. The amount in the hands of the farmers of the southern counties is 32 per cent; of the central counties, 25 per cent; and of the northern counties, 24 per cent. The total number of bushels of wheat reported marketed by farmers in February at the flouring mills is 457,595 bushels, and at the elevators 571,929 bushels, or a total of

1,029,524 bushels; in the seven months, August-February, the amount marketed is 11,887,534 bushels, or 528,134 bushels more than reported marketed in the same months last year. At 105 mills and elevators from which reports have been received there was no wheat marketed in February. The total amount of wheat shipped by railroads from the various stations, as reported for January, is 735,337 bushels.

GOVERNMENT CROP REPORT, March 10.—The Department of Agriculture issued the following report on March 10: The consolidated returns of the various crop-reporting agencies for the Department of Agriculture show the amount of wheat remaining in farmers' hands on March 1 to have been the equivalent of 29.2 per cent of last year's crop, or about 198,000,000 bushels. The corn in farmers' hands, as estimated, aggregates 800,500,000 bushels, or 41.6 per cent of last year's crop, against 782,800,000 bushels, or 41.1 per cent, on hand on March 1, 1898, and 1,164,000,000 bushels, or 51 per cent, on March 1, 1897. The proportion of the total crop shipped out of the county where grown is estimated at 20.6 per cent, or about 396,000,000 bushels. The proportion of the total crop merchantable is estimated at 82.2 per cent. Of oats there are reported to be about 283,000,000 bushels, or 38.7 per cent, still in farmers' hands, as compared with 272,000,000 bushels, or 38.9 per cent, on March 1, 1897.

Summaries of reports collected the last of February by the climate and crop service of the United States Weather Bureau indicate that over a large part of the principal winter wheat area the crop was exposed to very unfavorable weather conditions. As at the close of January, the reports indicate that the early sown was in better condition at the close of February than that seeded late. The crop seems to have experienced most unfavorable conditions in Oklahoma, Iowa, Michigan and New York, the northern portions of Missouri, Illinois, Indiana, Northwestern Ohio and Central and Eastern Tennessee. In Texas the crop made but little growth, and the damage resulting from the severe freeze will be so great that many fields will be plowed up. In Kansas the early sown has been but little injured, and over the southern portions of Missouri, Illinois, Indiana and Ohio the condition of the crop is generally promising, while in West Virginia, Pennsylvania, Maryland and Virginia, owing to ample protection afforded by snow, the reports as to the condition of wheat are encouraging. In Oregon and Washington the cold weather of the first half of the month was unfavorable. In Northern California the condition of the crop is promising, but rain is now urgently needed to save it over a large part of the state.

KENTUCKY CROP REPORT, March 1.—Answers to the question, "Has wheat suffered from any cause during the winter? If so, state cause," resulted in replies from 115 correspondents, of which number 97 state that wheat suffered from "freeze," and 18 say it has not been appreciably damaged during the winter. Heavy rains, particularly in the western section, are another source of no considerable damage. The condition for the state as a whole, compared with average years, is 80, which is a loss of 14 points since December 1. For the three preceding years the condition on March 1 was as follows: 1898, 92; 1897, 88, and 1896, 88. The three sections separately show the following average condition as of this date: Western, 70; central, 85, and eastern, 88. The per cent of crop of 1898 still in the hands of farmers is estimated at 26. On March 1, 1898, it was estimated that 17 per cent of crop of preceding year was then in the hands of farmers. On March 1, 1897, a similar estimate showed 9 per cent of the old crop in farmers' hands. The price of wheat March 1 averages 68 cents. On March 1, 1898, the average price was 90 cents, and March 1, 1897, the price was 84 cents. Estimates on the percentage of corn crop of 1898 still in farmers' hands give the amount at 42 per cent. On March 1, 1898, the per cent of crop of preceding year in hands of farmers was 44.

### A CORN WORM.

Speaking of the *Heliothis armigera*, a common pest infecting growing and standing corn, also known in the South as the boll worm, which is double-brooded in the North and three-brooded in the South, Prof. L. Bruner of Nebraska, in the Orange Judd Farmer, says: "In some sections it is destroyed by placing a lantern in the field, under which are set pans or plates containing water and kerosene, the lantern attracting the moths before their eggs are laid, and by their flutterings about they finally become lodged in the pan of water and kerosene below, and are killed. In the case of the insect as an enemy of corn, it can be destroyed to a considerable extent by seeking out and destroying the worms as they are found in the corn, but the best remedy by far is in the protection of blackbirds, which hunt and destroy the worms while they are working in the ends of the corn ears."



## WHEAT IN RUSSIA.

One curious feature of wheat growing in Russia is the fact that while the general trend since 1872 has been toward a larger acreage and a greater total yield, nevertheless frequently before, and every five years since 1880, with remarkable regularity, there has been a short crop. In 1872 the production was 157,938,000 bushels on 28,743,000 acres. In 1897 the yield was 340,470,000 bushels from 36,738,500 acres. This latter crop, although so short as to have suggested to advisers of the government last spring the desirability of prohibiting exports of grain and hay, as was done in 1891, was, in fact, more than double the yield of 1891 (163,475,063 bushels), the last real famine year. It must not be understood, however, that the increase of the acreage and of the yield during the years between 1872 and 1897 was regular by any means. On the contrary, the yield was quite erratic—157,038,000 bushels in 1872, 250 millions in 1874, 154 millions in 1876, 294 millions in 1878, 158 millions in 1880, 258 millions in 1884, 156 millions in 1886, 269 millions in 1887, 172 millions in 1889, 234 millions in 1892, 360 millions in 1893, and so on. The causes of these wide fluctuations may be explained later on.

The wheat zone of Russia in Europe extends from the southwest corner of the Empire to the Ural Mountains. This area is one of the most fertile sections of the globe, the soil being a layer of black humus from one to five feet thick, the decomposition through centuries of accumulated steppe grasses. The population, which is rapidly increasing, numbers from 65 to 75 per square mile; while the wheat crop of 1896 in the United States was grown in states like Minnesota, with a population of only 16.4 to the square mile, or California with 7.7, or Kansas with 17.4. The Russian conditions would seem to be such that the anticipations of the English landlords in 1840, that with the repeal of the corn laws an "avalanche of corn" would come from Russia to ruin them, might have been realized; yet such was not then and has not since been the case, although Russia's exports of wheat have from her earliest statistical record been the most important item of her export trade. It is noteworthy, however, as an indication of the economic conditions of the empire, that when the crucial test of Russia's ability to meet the requirements of her neighbors came, at times of general crop failures elsewhere, she has as often failed to respond to those demands as she has done so, even at times when her own crops were far above normal.

The ability to export wheat is, of course, controlled by the home demand for food. Thus there are 35 districts, or governments, in Russia which always grow a surplus of cereal foods, say rye and wheat; eight others usually produce enough for their own needs, while 17 districts always have a deficit. These 25 districts, therefore, consume nearly all the rye and some of the surplus wheat of the 35 productive districts, but leaving a large amount for export. The export trade is, however, affected in two ways. On the one hand, the lack of railway transportation, and the absence of capital in the hands of farmers to move the crops, operate to limit exports, but on the other hand, the nearness to market in part compensates for these difficulties, while the absence of a large and steady home demand for wheat for consumption naturally would stimulate exports; and as a rule one-half of the production is exported. The uncertainty of the volume of production, and even whether the exportable part of the production will reach the ports, tends to make Russian wheat a somewhat uncertain factor in the trade of the world in that commodity.

This uncertainty as to what Russia will do from crop to crop may find explanation mainly in the social condition of the peasant farmers. Nearly all are in debt, especially those who were once serfs or their immediate descendants, who received the incubus of debt as the first tangible evidence of their nominal freedom. The peasant farmer is ignorant, too, and, therefore, unlike the American farmer, is, as a rule, unable to resist the effects of speculation, and can form no idea, except from temporary conditions, whether he should increase or decrease the cultivation of any given kind of grain. So low also is the standard of honesty among the middlemen, or local grain buyers, that the singular fact is recorded that in so important a market as Kharkov the farmers were not informed of the current prices of grain, so that oats of the same quality sold simultaneously for 35 cents and 17½ cents per pood of 36 pounds; while the adulteration of grain by the exporters by mixing with rye and other cheaper or poorer grains, dirt and seeds has been a serious handicap to the export trade.

In addition to this sort of imposition, and to the imperfect and expensive transportation system, the peasant farmer is prevented by other conditions beyond his own control from obtaining the full benefit of the market. When he is ready to harvest his grain, in order to get the benefit of competitive markets he may apply to the local authorities for leave to travel. But here the factor, the grain

buyer, or the party who has made advances on the growing crops, steps in, and acting in collusion with the local police, throws such obstacles in his way as to defeat him in this purpose; and finally, when the market is glutted with grain in the hands of disheartened and defeated growers, the factor gets the grain at 25 per cent below its real value, which has already been mortgaged while growing for advances paid for at 25 per cent interest. Further, when the farmers are able to escape these harpies, they are still in danger of losing their grain, for it is recorded that millions of bushels are lost annually owing to the failure of the railway companies to move or shelter it. On the top of these things is the land mortgage, with interest due to the Russian money-lender whose name is a synonym for oppression. One year's failure of crops throws the farmer upon the mercy of the money-lender; two failures means utter ruin. These social conditions, coupled with a succession of adverse seasons, may explain why from 1872 to 1880, when the importing nations of Europe were obliged to look outside that continent for supplies, Russia's yield of wheat did not grow as rapidly as was warranted by the conditions, and why the acreage and yield are now so uncertain from year to year, and why, finally, when wheat-growing should have been profitable, Russian farmers abandoned its culture and turned their attention to the coarser and more hardy grains consumed within the empire. [A report by the Russian Minister of Finance, 1889, estimated that a pood, or 36 English pounds, of wheat cost the Russian producer 28 cents to grow, and 4.85 cents to lay down in London, whereas the same weight of American wheat would cost 33 cents to grow and 4.5 cents to market. In the black-earth region of Russia the total cost of production, including rent, was said to range from 22.5 cents to 30 cents per 36 pounds.]

The helplessness of the peasant, and the necessity of a foreign market for the surplus wheat of the empire, have induced the government to the establishment of a system of state aid, in operation since 1888. It was formerly the practice to accumulate a store of wheat by the rural communes against a time of famine. This practice, however, fell into disuse until the famine of 1891 revived it. The system is now in operation, the farmers either returning the grain borrowed for seed or food, or paying a grain tax in lieu thereof, the official providing the original store by means of a loan from a fund in bank returnable at 3½ per cent interest. Since 1888 the government has made loans to farmers on grain stored in warehouses or delivered to the railways, not exceeding 60 per cent of the current value of the grain, to run for six months or even a year, in order to relieve the peasant of the necessity of selling his grain as soon as harvested, and to provide funds for operating the farm. A short-time loan may reach even 80 per cent of the current price of the grain. The interest varies according to the condition of the grain, but is at least 6 per cent. In case of default the grain is sold at public auction by the railway acting as the agent of the bank. Like so many other efforts of the state to correct unnatural economic conditions by theoretical or arbitrary remedies, which we have seen in practice in the old world particularly, this system has not been an entire success, nor operated in the manner anticipated by its friends. Naturally its supposed benefits reach the few only; and since loans may be obtainable only on grain actually in store in the favored warehouses, or delivered to the railways, and not on grain in the peasant's hands, the natural result is to hasten the marketing of the grain and its removal from the place of production, and, as experience proves, from the place where it is most needed.

A better plan for assisting the peasants was the government's practice of publishing current prices of cereals at all railway stations. The government has also revised the railway freight tariffs from time to time, and made an effort to correct to a degree the gross discriminations against certain localities. The power of the state in this regard has been especially exercised at times of great emergency, as, for example, when Germany in 1892-93 excluded Russian rye and wheat, the government arbitrarily reduced the freight on grain to the Austrian and Roumanian frontiers, this saving of about 6 cents a bushel in freight enabling the exporter to sell his grain in markets where he had not before found a ready sale because of the cost of transportation.

From time to time reports of the immense wheat possibilities of Siberia have come westward, and undoubtedly there are great stretches of country in Russian Asia capable of growing wheat; but in the famine year 1891, when, it may be assumed, all available resources of the empire were drawn on for food, only 9,000,000 bushels of Siberian grain came into Europe, although two-thirds as much more might have been purchased had it been possible to transport it westward. The Siberian railway, now nearly completed, had even then penetrated far eastward into Asiatic Russia.

"Thus Russia stands on wheat where the United States stood in the middle of the century," says Mr.

W. C. Ford, late of the national Bureau of Statistics, writing on "The Question of Wheat" in the Popular Science Monthly, from which we have obtained the above facts. "Her farmers are hampered by lack of transportation, by debts and by the survivals of a regime of serfs. In Europe Russian wheat finds a ready market, naturally protected against outside competitors by propinquity or geographical position. But the peasant of Russia will consume more of his product each year, and it is very doubtful if the wheat capabilities can develop to such an extent as to place the country in a position to command her present market. An economic revolution must first be accomplished, and there is evidence of its approach at the present time. It may be checked by the Asiatic ambitions of the Tsar, but on its accomplishment depends the future of wheat in that great empire."

## A TRIBUTE TO CORN.

A few years ago at a Chicago club dinner party, Hon. Richard Oglesby, ex-governor of Illinois, made an extemporaneous address, the inspiration of which he found in the decorations of the banquet hall, which consisted of agricultural products symbolical of the harvest period. The speech was never published; but recently one of the old governor's auditors by request wrote out the following extracts from memory. The story goes that at the banquet referred to Governor Oglesby made a deliberate survey of the sheaves of wheat and oats, the festoons of apples and heaps of pumpkins, and then let his eyes rest upon the magnificent stalks of corn which adorned the wall before him. Then he launched forth in an apostrophe to the corn, substantially as follows:

"The corn! The corn! The corn! That in its first beginning and its growth has furnished aptest illustration of the tragic announcement of the chiefest hope of man. If he die he shall surely live again. Planted in the friendly but somber bosom of the mother earth it dies. Yea, it dies the second death, surrendering each trace of form and earthly shape until this outward tide is stopped by the reacting vital germ, which, breaking all the bonds and cerements of its sad decline, comes bounding, laughing into life and light the fittest of all the symbols that make certain promise of the fate of man. And so it died, and then it lived again. And so my people died. By some unknown, uncertain and unfriendly fate I found myself making my first journey into life from conditions as lowly as those surrounding that awakening, dying, living infant germ. It was in those days when I, a simple boy, had wandered from Indiana to Springfield that I there met this good man—Joseph Jefferson—whose kind and gentle words to me were as water to a thirsty soul, as the shadow of a rock to a weary man. I loved him then; I love him now. Two full generations have been taught by his gentleness and smiles and tears have quickly answered to the command of his artistic mind. Long may he live to make us laugh and cry and laugh by turns, as he may choose to move us.

"But now again my mind turns to the glorious corn. See it! Look on its ripening, waving field! See how it wears a crown, prouder than monarch ever wore; sometimes jauntily and sometimes after the storm the dignified survivors of the tempest seem to view a field of slaughter, and to pity a fallen foe. And see the pendant caskets of the cornfield with the wine of life, and see the silken fringes that set a form for fashion and for art.

"And now the evening comes, and something of a time to rest and listen. The scudding clouds conceal the half and then reveal the whole of the moonlit beauty of the night, and then the gentle winds make heavenly harmonies on a thousand harps that hang upon the borders, and the edges, and the middle of the field of ripening corn, until my very heart seems to beat responsive with the rising and the falling of the long, melodious refrain. The melancholy clouds sometimes make the shadows on the field and hide its aurate wealth, and now they move and slowly into sight there comes the golden glow of promise for an industrious land. Glorious corn, that more than all the sisters of the field wears tropic garments! Nor on the shore of Nilus nor of Ind does nature dress her forms more splendidly. My God, to live again that time when for me half the world was good and the other half unknown.

"And now again. The corn, that in its kernel holds the strength that shall (in the body of the man refreshed) subdue the forest and compel response from every stubborn field, or shining in the eye of beauty make blossoms of her cheeks and jewels of her lips, and thus make for man the greatest inspiration to well doing, the hope of companionship of that sacred, warm and well-embodied soul, a woman."

Manitoba farmers are marketing their damp wheat as rapidly as possible, getting on February 20 from 40 to 45 cents.



# OBITUARY

R. W. Collins, of the firm of Harris & Collins, grain dealers at Elyria, Ohio, died Feb. 10.

Geo. E. Reagan, a grain inspector of South Chicago, Ill., committed suicide by shooting himself on Feb. 20.

D. Poest, proprietor of the Zealand Elevator, and a highly esteemed citizen of Zealand, Mich., died there last month.

Jacob Rheem, for many years engaged in the grain and forwarding business in Carlisle, Pa., died at York on Feb. 26, aged 88 years.

Joseph L. Rodier, a grain merchant at Worcester, Mass., died Feb. 12. He was a native of St. Hyacinthe, P. Q., and 64 years of age.

Joseph Furlong, weigher for Early & Daniel of Cincinnati, died Feb. 10 of pneumonia. He was a brother of Public Weigher Furlong.

Alex. R. McHenry Jr., died in New York City, Feb. 15. He was formerly a member of the grain firm of McHenry & Sons in Philadelphia.

Frank H. Mitchell died at Wilmington, N. C., on Feb. 28, aged 58 years. Deceased was a partner in the B. F. Mitchell Co., extensive dealers in grain, hay, peanuts, etc.

N. R. Steadman died recently at his home in Warsaw, N. Y. He was part owner of the Steadman-Irwin Elevator at Sank Center, Minn., and made annual visits to that place.

John Conway, a pioneer grain dealer of Milwaukee, died recently at the age of 81 years. After amassing a comfortable fortune, he retired from active business about 20 years ago.

G. F. Yengling, a grain and wool dealer of Minerva, Ohio, died recently from complications arising from the crushing of his foot, which later on had to be amputated. He did not rally from the shock of the operation.

D. N. Harwood, for 40 years a grain and hay shipper at Shelbyville, Ill., died February 28 of diabetes. He was 60 years of age and well known in shipping circles in his section. He also had offices at Mattoon, Windsor and Cowden.

C. W. Keeler died at his home in Minneapolis on March 2 of pneumonia and the grip. He was employed by the Van Duzen-Harrington Grain Co. and was formerly engaged with the S. Y. Hyde Elevator Co. at La Crosse, Wis.

Martin Linevebber of Manito, Ill., who was widely known as the "corn king" of Illinois, was drowned last month near Hartwell, Mo., where he had gone to look after his 3,000 acres of land. Last year he had raised over 1,200 acres of corn.

James Moyes, manager of the Atlantic Elevator at Fairmount, N. D., shot himself through the heart one day last month. He was a single man, 35 years of age. His act was said to be due to worry over a reported shortage in his wheat account.

Francis Cookman died Feb. 18, at his home in Germantown, Philadelphia, aged 72. He engaged in the grain business in Philadelphia when a young man and continued to be a member of the Commercial Exchange until his death, which resulted very suddenly from heart disease.

C. K. Baxter, representative of the W. W. Cargill Co. at Wells, Minn., died there on Feb. 8, aged 55 years. He entered the employ of the Cargill Co. in 1876 and was considered one of the company's oldest and best men. He had charge of the elevator at La Crosse for a number of years.

John Stuart, a resident of Chicago, died at Covina, Cal., Feb. 12, aged 72 years. He came from Scotland to Ingersoll, Can., in 1850, where he successfully conducted an oatmeal mill. In 1880 he came to Chicago and was an active member of the Board of Trade for a number of years. His son, Robert Stuart, is treasurer of the American Cereal Co.

John Macmillan Kennedy died at his home in Oak Park, Ill., on March 7. He was born in Scotland in 1815. He lived on a farm near Ottawa, Ill., for twelve years prior to 1849, when he removed to Chicago. Here in 1858 he was appointed chief of police and served for two years. Following this he was engaged in the grain commission business for many years.

Edward M. Jordan of Heyworth, Ill., died Feb. 22, aged 37 years. After an illness of four weeks from la grippe, he appeared to be improving when he suddenly grew worse and expired. Mr. Jordan lived at Clinton until about four years ago, when he moved to Heyworth and established the grain business of Jordan Bros. Under his management this business had prospered. Mr. Jordan was a member of the Illinois Grain Dealers' Association, was a square-

dealing young man and well liked by all who knew him.

Charles J. Tauner died of consumption at his home in Chicago on Feb. 16. He was born in Attica, N. Y., in 1838, came to Chicago in 1862, and had been, from that time until two years ago, engaged in the grain commission business. He was compelled to retire from business on account of failing health.

James L. Wheeler, the well-known traveling salesman for the Invincible Grain Cleaner Co., died at his home in Grand Rapids, Mich., on February 21. His death came very suddenly. Although he had not been in good health for some time, he did not look upon it seriously until about a week before his death. During this time, however, he suffered terribly, probably from kidney trouble, and was able to get little if any sleep. During his illness and suffering he was very patient and appreciated everything that was done for him. Mr. Wheeler was born in Wheeler, Steuben Co., N. Y., Jan. 17, 1843, where his father was a miller. When out of school he worked in the mill until 16 years of age, when he went to Prattsburg, N. Y., to operate a mill. After four years he went to Augusta, Mich., where for six years he had charge of a mill, during which time he was married. He moved from Augusta to Grand Rapids, where he had charge of the Valley City Mills until 1884. In that year he left this position to assist in the organization of the Rickerson Roller Mill Co., which manufactured the Rickerson Roller Mill. After the failure of this enterprise Mr. Wheeler went to Marysville, Cal., where he served for a year and a half as a miller. He then returned to Grand Rapids and soon went on the road selling grain-cleaning machinery, and became identified with the Invincible Grain Cleaner Co. upon its organization, and since 1896 he has traveled over the states of Missouri, Illinois, Indiana and Michigan. He had a wide circle of friends and acquaintances and was a very successful salesman.

## The EXCHANGES

The Chicago Board of Trade directors have reappointed the following grain samplers: H. T. Gubbins, R. P. Kettles, William McDougall, W. A. Walker, G. Ray Bullen and J. A. Costello.

The Chicago Board of Trade is a strongly officered organization, from a numerical standpoint, at least. It has forty officers and an active membership of about 1,000, which gives one officer to each 25 active members.

The Indianapolis Board of Trade, composed largely of grain men and millers, has been considering a proposition from the Commercial Club of that city to consolidate. This proposition, however, does not seem to meet with much favor.

The call board established on February 9 by the Winnipeg Grain Exchange has proved very satisfactory. A very considerable amount of cash and future business has been done. The standard grade is No. 1 hard, and the deals are all on a basis of in store at Fort William.

On February 23 the Superior Board of Trade held its annual election of officers, which resulted as follows: President, W. R. Fanning; first vice-president, D. W. Twoby; second vice-president, M. L. McMinn; directors (for three years): Frank R. Crumpton, B. D. Cooke and H. G. Atwood.

We have received a copy of the twentieth annual report of the Winnipeg Board of Trade of Winnipeg, Manitoba. This report shows the organization to be alive to every subject bearing on the industrial and commercial progress of Manitoba and the Northwest. In this, of course, the grain trade plays an important part, the wheat and flour exports of Manitoba for 1898 being estimated at 30,000,000 bushels.

Members of the Minneapolis Chamber of Commerce are arousing themselves to the fact that the present building affords very inadequate facilities besides being inconveniently located. At least two propositions are being debated; one is to expend from \$150,000 to \$200,000 in enlarging the present structure, and the other is to build or secure a large building in the heart of the city. A building site next to the Guaranty Loan Building seems to be in greatest favor at present. The land and building would cost upward of \$1,000,000.

At a recent meeting of the executive committee of the Montreal Corn Exchange Association, a report was submitted regarding shortages at seaboard elevators, to the effect that prospects are favorable for the railway companies consenting to have their weighmen sworn under the Dominion Act of 1887. A letter to the Minister of Railways and Canals, urging the government to provide elevator accommodation for the large quantity of grain which it is expected will, in the near future, reach Montreal by the enlarged canal system, was con-

sidered and approved for communication to the minister.

Lord Beresford was given an enthusiastic reception by the Board of Trade on his recent visit to Chicago. President Lyon gave him a happy introduction, and the brokers received Lord Beresford and his speech with rousing salutes.

We have received a copy of the "Annual Statement of the Trade and Commerce of St. Louis for the year 1898, reported to the Merchants' Exchange of St. Louis, by Geo. H. Morgan, Secretary." As usual, it is a very complete compilation of over 300 pages, and reflects great credit upon the secretary for his industry in putting so much information in permanent and available form. The number of members on Jan. 9, 1899, was 2,079, which, with but one exception, is the largest in the country. The combined capacity of the 10 public elevators in the city is 9,100,000 bushels of bulk grain, and in addition there are 17 private elevators, with a combined capacity of 2,358,000 bushels.

## COMMISSION

E. F. Catlin & Co., hay and grain commission merchants of St. Louis, have assigned.

The Churchill-White Grain Co. of Chicago has incorporated with a capital of \$15,000.

W. C. Lamping has succeeded Bert Long as St. Louis representative of Ware & Leland of Chicago.

R. J. Loughery & Co., of Chicago, grain commission merchants, have filed a voluntary petition in bankruptcy.

The Union Investment Co. of Charleston, W. Va., has incorporated to deal in stocks, grain and provisions.

The Guaranty Exchange Co. opened business in Buffalo, N. Y., on March 1 as general commission brokers.

Price & Co., Chicago, have incorporated with a capital stock of \$10,000, to do a grain commission business.

Lysaght & Lysaght, grain and provision brokers, after doing business for a few weeks at St. Joseph, Mo., have discontinued.

The R. S. Goodwin Co. of Baltimore has incorporated with a capital of \$10,000 to do a general commission business.

The Lexington Stock & Grain Exchange, under the management of D. L. Van Culin, has opened an office at Lexington, Ky.

The Central Grain & Stock Commission Co. has been incorporated at Milwaukee, with a capital of \$3,000, by F. E. Ludington, F. L. Bacon and L. H. Grove.

A. M. Lynch of Chicago will give up his produce business on May 1 and devote all his time thereafter to his hay, grain and seed business on the Board of Trade.

The Farmers' & Merchants' Grain and Produce Commission Co. of San Francisco has incorporated with an authorized capital of \$250,000, \$500 of which is subscribed.

The Bluthardt Commission Co. of St. Louis has incorporated with a paid capital of \$4,000. Robt. E. Bluthardt, Walter E. Orthwein and A. C. Meyer are the incorporators.

Barret Commission Company of St. Louis has incorporated with a capital stock of \$15,000, all paid. The stockholders are Arthur B. Barret, Emil Spohr and Henry F. Dryden.

The furniture and fixtures in the office of Werckshagen, Beugger & Herzog, flour, feed and grain exporters at New York, was levied on by the sheriff last month and the office closed.

Donaldson & Co. of Buffalo have incorporated to deal in stocks, grain and provisions, capital \$10,000; directors, William F. Donaldson, George S. Donaldson and John Donaldson of Buffalo.

John Hill Jr. & Co. of Chicago have incorporated with a capital stock of \$20,000. The company will carry on a general commission business in grain and seeds. John Hill, Jr., is president of the company and S. H. Greeley, secretary.

Up at Armour, S. D., one day during the February cold snap, when the grain business was not very good, but when the speculative fever was active and the mercury out of sight, Geo. Chesley and Homer Knapp bet Jim Carlon \$10 that he could not walk to Tripp (about 25 miles) in seven hours. The day was a frosty one, the mercury registering about 20 degrees below zero; but Carlon counted the ties, and won out with an hour to spare.



## Fires - Casualties

The grain office of J. Geo. Wolf & Sons at York, Pa., suffered considerable damage by fire last month.

The elevator and warehouse at Andrews, Ind., was burned March 8. The loss is reported to be \$4,000 with no insurance.

A small blaze in the engine room of Gottron & Cook's elevator, Fremont, Ohio, was discovered and quickly extinguished one Sunday last month.

Some bad boy, it is supposed, placed a brick on a drag belt in R. C. Noble's elevator at Bethany, Ill., which resulted in considerable damage to the machinery.

The Armour Elevator D, at Chicago, just completed, burst into flames on the night of February 12, but a fire boat and a dozen engines soon got the fire under control.

A farmer's hatchet was dumped with a load of corn at Twist Bros' elevator, Pawnee, Ill. It passed through to the sheller unnoticed, doing about \$100 worth of damage.

C. G. Wieland of Warrenton, Ill., experienced some expense and delay in the operation of his elevator last month through damage to the cylinder of his engine by freezing.

The Rabskopf Elevator in North Lawrence, Kan., was burned on March 2. The loss was about \$5,000. The elevator had not been in use for some time, and was partly owned by the Lawrence National Bank.

Richard Prave, a foreman in the employ of Goldie & Sons, contractors for the large Peavey Elevator at Council Bluffs, Iowa, had his right leg badly crushed by a huge rock falling upon it one day last month.

Chas. T. Tucker's grain warehouse at Lincoln City, Ind., was destroyed last month by a fire supposed to have been started by tramps. It contained some clover seed and wheat. The loss is said to be about \$7,000, partially insured.

The large floating elevator Columbia, belonging to the International Grain Elevating Company, was burned in New York harbor on February 20. It was valued at \$200,000. It was used for transferring grain from canal boats to sea-going vessels.

The grain warehouse at Mason, Ill., was destroyed by fire last month. It was occupied by Douglas & Son, Thos. Donaldson and R. G. Gibson & Son, who lost stocks of hay, oats and corn. There was partial insurance except in the case of Mr. Donaldson.

The elevator at the Marsden Cellulose Co.'s plant, Owensboro, Ky., was damaged by fire to the extent of \$500 last month. Prompt work of the fire department saved the plant from a repetition of the complete destruction with which it was visited two years ago.

A grain warehouse at Thousand Island Junction, Ont., owned by The Rathbun Co., Deseronto, was destroyed by fire on March 9. Of the grain in store 8,000 bushels was owned by Franklin & Grimshaw and 4,000 bushels by Richardson & Sons, both of Kingston. The grain was insured.

Sharp Brothers' elevator at Congerville, Ill., was burned about 2 a. m. on February 14. It contained about \$1,000 worth of grain, on which there was no insurance. The building was insured. It will probably not be rebuilt, as Sharp Bros. recently purchased another elevator in the town.

An incendiary attempt to destroy the Victoria Elevator at Minneapolis was made on the morning of February 22. The fire however, was immediately discovered just inside a rear door, where it was started, and extinguished by the fire department before any material damage had been done.

A. W. Skinner's elevator at Hudson, Ill., was burned on the night of February 16. The house had a capacity of 40,000 and contained 20,000 bushels of grain at the time of the fire. The grain was fully covered by insurance. The elevator was erected last September, and the loss was partially covered by \$3,500 insurance.

Geo. T. Elliott's elevator at Mattoon, Ill., containing a few thousand bushels of corn and oats, was burned on the night of February 13. The building had long been used as a hay warehouse, but was remodeled about a year ago into an elevator. The insurance on building and contents amounts to \$5,500. This is Mr. Elliott's fourth elevator fire.

Chas. Baumann, of Baumann Bros., a grain commission firm at Milwaukee, was badly blistered around the face and hands and otherwise injured by an explosion which resulted when he opened the vault door in the office and struck a match. The gas fixture apparently had leaked and filled the

vault. The windows were blown out of the office and Mr. Baumann was thrown some 10 feet from the vault to the floor.

J. W. Rinney & Co.'s elevator at Scandia, Kan., was destroyed by fire early on the morning of February 8. Six thousand bushels of corn as well as the contents of the feed mill in connection were entirely destroyed. A near-by crib of ear corn was saved. There was no insurance. This leaves the town without an elevator or place for storing shelled grain.

Geo. L. Bosworth's elevator at Manley, Iowa, containing about 8,000 bushels of oats, was burned on February 14. The loss is about \$5,000, partially covered by insurance. It was a cold morning and an oil stove was being used to help generate the gasoline for the engine. It was left for a short time and an explosion of the gasoline followed, starting the fire.

The elevator at Newburg, Iowa, leased by Roberts & Clay, was destroyed by fire last month. It contained 20,000 bushels of oats, and a crib containing about 13,000 bushels of oats was also destroyed. The fire occurred about 2 a. m., and is supposed to have started in the boiler room. There is said to have been an insurance of \$1,500 on the grain in elevator but none on the cribbed corn.

F. A. Wentworth's elevator and feed mill at Bailey, Iowa, was discovered to be on fire on the morning of March 6. It soon got beyond control and destroyed everything except the 10-horse power gasoline engine, which was saved by about 40 bushels of wheat breaking through the floor above and protecting it. The loss is about \$2,500 with no insurance, but Mr. Wentworth will resume business at once.

The elevator operated in connection with the Hungarian Mills at Denver, and owned by the Colorado Milling & Elevator Co., was largely destroyed by fire on March 7. The fire originated in the dust room, where an explosion occurred. The total loss is probably not less than \$150,000, which is fully covered by insurance. The elevator had a capacity of 400,000 bushels and contained at the time of the fire about 300,000 bushels of wheat. The insurance was distributed among a large number of companies.

## Items from Abroad

Burmah rice for export this season is estimated 12 per cent under last year.

Up to March 1 the weather in England has been very favorable for wheat and the farming interests generally.

Portugal during February ordered between 400,000 and 500,000 bushels of corn for immediate shipment from America.

Russian wheat shipments for season to February 18 were 40,952,000 bushels, against 69,424,000 bushels season previous.

The question of a reserve food supply in England continues to excite discussion, and has even invaded Parliament again on an amendment to the address in reply to the Queen's speech.

The Indian corn crop of the Argentine at the middle of January was, "as a rule, in magnificent condition." The weather, too, has been unfavorable to the hatching of locust eggs, which is favorable also.

At the Bristol Corn Trade Association's dinner, held February 10, it was stated that Bristol's imports of grain for the nine months ended January 31 had beaten all previous records by 2,400,000 bushels.

The Russian wheat crop in 72 governments is estimated by the government at 153,700,000 bushels, being an average of 12.3 bushels per acre. The four Siberian governments produced only 115,200 bushels.

The London Corporation in 1897 (last account published) derived about \$95,000 revenue from city duty on grain. The money was devoted to the creation of city parks, or "open spaces." The duty was authorized by Parliament in 1872 to continue for 30 years, the amount levied being three-sixteenths of a penny per ton on grain brought into the port for sale.

An English correspondent says that the Russian government is about to appoint a commission to inquire into the state of the grain trade, this step being a reply to complaints of the lack of proper facilities at Russian ports in the way of warehouses and elevators, and of the rascally tactics of those engaged in the grain trade as buyers, agents and forwarders.

Flax fiber is one of the oldest of New Zealand exports, the trade having begun with Sydney, N. S. W., as early as 1828 to 1832. It was all hand-dressed and was worth from £50 to £70 per ton. The trade of late years shows a curious condition, the quantity of flax exported having increased from 1,308 tons to 21,158 tons, and the value from £26,285 to £381,789,

that year representing the highwater mark of the industry. Since then there has been a gradual falling off in this trade, due to the decline in prices, the exports for 1877 having been but 2,769 tons.

The American Consul at Mannheim, reporting on grain imports, gives the supplies of grain in private warehouses in that city as in every case barely one-half as great as at January 1, a year ago, except of barley, which were about 25 per cent greater.

The Manchester ship canal continues to show an increase of vessels using it, the total tonnage of 1898 for sea-going craft having exceeded 2,218,000, as against 1,700,479 tons in 1897 and 686,158 tons in 1894. The total profit for the year of the canal was £61,012, say \$305,000.

A Birmingham paper, in a review of the English agricultural year 1898, estimates the wheat and barley crop of Great Britain as the largest on record, with two exceptions, the yield having been 73,028,856 bushels of wheat on 2,102,206 acres, and 68,051,918 bushels of barley on 1,903,666 acres.

It is proposed to erect six elevators for grain at Buenos Ayres—four in the docks and one in each of the basins—says an item in Engineering; but one is at a loss to understand why this wholesale construction should be entered upon now and at Buenos Ayres, when the bulk of the grain is loaded at Rosario.

Argentine exports of cereals for 1898 were as follows: Wheat, 682,244 tons (94,229 tons in 1897); corn, 758,236 tons (374,439 tons in 1897); linseed, 154,590 tons; flour, 26,626 tons (40,632 tons in 1897); hay, 771,134 tons. Belgium took the most wheat, Great Britain the most corn, Germany the most bran and linseed, Cape Colony the most hay.

The annual imports by Great Britain of grain for 1898 amounted to 140,762,905 cwts. for England, 21,428,035 cwts. for Scotland, 18,819,375 cwts. for Ireland, and 3,238,920 cwts. for Wales. Liverpool, London, Hull and Bristol lead in the volume of imports in the order named in England; Glasgow and Leith lead in Scotland; Belfast, Dublin and Limerick in Ireland, and Cardiff in Wales.

The sale of bags is generally a very fair criterion of the size of the wheat and flax harvests. This year the sales have amounted to 37,000,000 bags with a capacity of 75 kilos each, equivalent to 2,775,000 tons. The price of bags has gone up over 50 per cent during the past few days, and telegraphic orders have been sent to Europe for more raw material. Should the maize crop turn out a success, the total export of cereals in various forms should amount to about 3,500,000 tons.—Review of the River Plate.

## OUR CALLERS

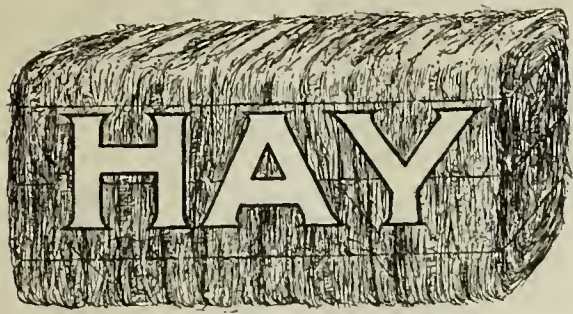
We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

E. S. Herron, Allerton, Ill.  
D. H. Cramer, Lexington, Neb.  
L. T. Allison, Arlington Heights, Ill.  
J. H. Herron of Sidell Grain & Elevator Company, Sidell, Ill.  
John J. Snyder, representing Botts & Levering, Baltimore, Md.  
John Frazer, representing E. P. Allis Company, Milwaukee, Wis.  
H. F. Mooers, of Goderich Elevator & Transit Company, Goderich, Ont.  
Edwin Mooers, of Kingston Elevator & Transit Company, Kingston, Ont.  
L. S. Meeker, Minneapolis, Minn., representing Harmon-Whitmore Company, Jackson, Mich.  
Arthur H. Parnall, New York City, representing Broomhall's Corn Trade News, Liverpool, England.



The freezing and thawing period is now here—farmers will be anxious for a while.—Zahn's Circular.





The St. Joseph Hay & Feed Co. has sold its business at St. Joseph, Mo., to H. M. Dysart.

The W. L. Niver Company, dealers in hay and feed at New York City, has passed into the hands of a receiver.

Walter O. Clark, representing Wm. Shoemaker, dealer in hay and grain at Oakwood, N. Y., has opened an office and warehouse at Ovid, Mich.

There was some talk during the last of February concerning a consolidation of interests of some of the large hay and grain dealers of Pittsburg and Western Pennsylvania.

Imported hay, into Oregon, from the Sonnich Valley, Vancouver, B. C., recently brought \$20 per ton. The lot was English Couch Grass Hay and was considered an excellent variety.

The National Hay Association wants every hay dealer in the country to join the Association before the next annual meeting. Those contemplating joining should address E. L. Rogers, chairman of the Membership Committee, Philadelphia, Pa.

The large hay shed of W. P. Towser & Co., in the rear of their grain elevator at Hagerstown, Md., collapsed under the weight of snow and rain recently, entailing a loss of about \$300. Quite a large amount of hay was in the shed at the time of the accident and an improved hay cutter, packer and engine received slight damages. The shed will be rebuilt.

There seems to be a growing demand in Cape Town and other points in South Africa for hay, to take the place of the oat straw or "oat sheaf," which is used as fodder in that country. This sells at from 96 cents to \$1.66 per 100 pounds. It is estimated that hay would be a profitable import if it could be delivered to those points at from \$15 to \$20 per ton.

Very many of the newspapers of the South, particularly in Georgia and South Carolina, are directing the attention of farmers to the advantage of raising a crop of hay instead of cotton. It is claimed that hay can be raised at a greater profit to the producer than in the North, and that cotton, which, of late, has not been a profitable crop, should be abandoned for hay.

Daniel McCaffrey's Sons of Pittsburg, Pa., in their market letter of March 2, gave some very valuable hints to dealers as to the advisability of shipping No. 1 clover mixed and No. 1 choice clover hay. Concerning these grades the letter said: "The old-fashioned winter which we are now enduring has greatly lessened the stock of choice mixed hay throughout the country. You are no doubt aware that March and April are the severest and most trying periods throughout the year on milch cows and it becomes necessary for the intelligent dairyman to handle his stock with the greatest care and furnish them with the best Clover Mixed or Clover Hay obtainable, in order that their yield of milk shall not be decreased, either in quality or quantity, and they are willing to pay our price for the best grades. This fact is further evidenced by the daily receipts of numerous orders from dairymen throughout a radius of 200 miles by our firm, which has been recognized for years as headquarters for dairy hay."

The following is taken from the weekly report of Collins & Co., Cincinnati, Ohio, for the week ending with March 10: The values of hay this crop have ruled so low as to offer but little inducement on the part of the trade to carry much in the way of stocks, and they have pursued a policy of buying from hand to mouth as the demand warranted, consequently when roads became impassable and arrivals were shut off, the small supply on hand caused a sharp advance to take place, with a market more or less erratic. Prices advanced for No. 1 Timothy from \$8.50 to \$11 per ton, holding for a few days and then declining to \$9.50 and \$9, as the receipts grew more liberal. Conditions are becoming more settled, and the recent extreme prices will probably cause larger arrivals here for a few days, and prices may go to \$8.75@8.50 for No. 1 Timothy for a short time. Future values will be governed largely by the condition of country roads and the extent of the offerings before the planting operations have begun. The consensus of opinion among the trade is that No. 1 Timothy will not sell much below \$9 for the rest of the season, with a possibility of higher, rather than lower, prices just as soon as the market is cleaned up, and this is anticipated to be done quickly. Choice Timothy is

fairly quotable at \$9.50@9.75; No. 1, \$9.00@9.25; No. 2, \$8.00@8.50; No. 3, \$6.00@7.00; No. 1 Clover and Clover Mixed, \$8.00@8.50; No. 2 Clover and Clover Mixed, \$6.50@7.00. Straw is steady. Wheat, \$4.50@5.00; Rye, \$5.50@6.00. Scarce. Bran in bulk, \$14.00@14.25; Middlings, \$14.50@15.00, as to quality. The receipts for the week were 1,471 tons. Shipments, 977 tons.

Arguments are not wanting to convince the fair-minded that the railroad companies should pay more attention to providing, at suitable points, the proper facilities for the handling and warehousing of hay. Taking the figures of last year's production of all kinds of grain in bushels and hay in tons, and reducing the figures to carloads of ten tons each, gives of oats, 1,169,449; wheat, 2,025,446; corn, 5,387,717; rye, 78,841; barley, 133,901; hay, 6,637,691. As shown by the figures, there were more carloads of hay handled than any of one kind of grain, and yet the shipper of hay is offered the least accommodation, by the railroad companies, of anyone engaged in handling farm products.

The Union Grain and Hay Company of Cincinnati, Ohio, recently sold a car of hay to Orth Bros., that graded No. 1 Timothy, at \$10 per ton. The price was recorded on the sales book, but afterward the question was raised as to whether that price could be considered the market for No. 1 hay. It was agreed to change it to a sale by sample through an arrangement between the buyer and the seller. This was done as a concession to some of the members, who thought that the grade price had been made too high. Those who thought that the grade price should stand, alleged that the receipts were so light and the demand for good hay of such importance that the hay brought the price quoted. The change was made to sale by sample and it was thought the matter was settled. Those who were of the opinion that the price should stand as for No. 1 Timothy took the subject up again, however, and it was finally referred to the superintendent, who decided that the price as quoted for No. 1 should stand as a legitimate sale. It has been some time since the members of the Cincinnati Chamber of Commerce have had a more interesting subject under discussion.

#### REVIEW OF CHICAGO HAY MARKET.

The prices ruling for hay in the Chicago market during the past four weeks, according to the Daily Trade Bulletin, were as follows:

During the week ending February 18, the receipts were 3,423 tons, against 3,884 tons for the previous week. Shipments for the week were 209 tons, against 281 tons for the previous week. A quiet market was experienced throughout the week and a steady feeling prevailed. The arrivals were only moderate and the demand was also light. Sales of Choice Timothy ranged at \$8.75@9.25; No. 1, \$8.00@8.50; No. 2, \$7.50@8.00; No. 3, \$6.00@7.00; Not Graded, \$7.00@8.25; Choice Prairie, \$8.25@8.75; No. 1, \$7.50@8.00; No. 2, \$5.75@7.00; No. 3, \$5.00@5.25. Rye straw sold at \$5.50@6.00, wheat straw at \$4.50, and oat straw at \$3.50@4.25.

During the week ending February 25, the receipts were 4,601 tons, against 3,423 tons for the previous week. Shipments for the week were 433 tons, against 209 tons for the previous week, only a moderate business was transacted throughout the week. The arrivals of Timothy Hay were larger and the local inquiry showed some improvement with a trifle more doing on shipping account. Prices ruled steady and unchanged. Sales of Choice Timothy ranged at \$8.50@9.00; No. 1, \$7.75@8.50; No. 2, \$7.00@8.00; Not Graded, \$6.00@7.50; Choice Prairie, \$8.00@8.75; No. 1, \$7.75@8.50; No. 2, \$5.75@7.00; No. 3, \$4.50@5.00. Rye straw sold at \$5.50@6.50, and oat straw at \$4.00@4.50.

During the week ending March 4, the receipts were 3,116 tons, against 4,601 tons for the previous week. Shipments for the week were 223 tons, against 433 tons for the previous week. The offerings were only moderate during the early part of the week and the demand was just fair, with no change in prices. Later the arrivals fell off very materially and prices advanced \$0.50@1.00 per ton. At the advance local dealers were taking hold very sparingly and awaiting further developments. The market closed firm. Sales of Choice Timothy ranged at \$8.75@9.75; No. 1, \$8.25@9.00; No. 2, \$7.50@8.00; No. 3, \$7.00@7.50; Not Graded, \$6.50@7.50; Choice Prairie, \$8.00@10.00—outside price late in the week; No. 1, \$8.00@9.00; No. 2, \$6.00; No. 3, \$5.25@6.00; No. 4, \$5.00. Rye straw sold at \$5.50@6.50, and oat straw at \$4.00@4.75.

During the week ending March 11, the receipts were 3,238 tons, against 3,116 tons for the previous week. Shipments for the week were 241 tons, against 223 tons for the previous week. The arrivals during the early part of the week were light and a moderate demand existed. Prices ruled firm. Later, the offerings became more liberal, and the demand was light. Dealers held off for larger receipts, and the market ruled quiet and rather dull. Sales of Choice Timothy ranged at \$9.25@10.50; No. 1, \$8.25@9.50; No. 2, \$7.50@8.75; Not Graded, \$7.00@8.50; Choice Prairie, \$9.00@10.00; No. 1, \$7.00@8.00; No. 2, \$6.00; No. 3, \$5.50@7.50—outside for Iowa; Not Graded, \$9.00. Rye straw sold at \$5.50

@6.50, wheat straw at \$5.00, and oat straw at \$4.25 @5.00.

## TRANSPORTATION

Wheat charters to Buffalo have been made at Chicago at 3¼ cents.

Ocean freights still centime at the bottom, or 1 cent per bushel to Liverpool.

Lake transportation companies expect the coming season to be the most active and prosperous seen for years.

The whaleback Pathfinder was chartered at Milwaukee February 17 for 130,000 bushels of wheat at 3½ cents.

The Erie Canal boatmen have asked the authorities to open the canal on April 1, the usual date having been sometime in May.

Since March 1, western railroad men have been anticipating a falling off of grain tonnage, and have been loaning their cars to their eastern connections.

E. Hoagland of Fairview, Fulton County, has been appointed assistant secretary of the Illinois Railroad and Warehouse Commission, to succeed William Malloy, resigned.

The Canadian Pacific road has reduced the demurrage rate at North Bay, Toronto, Ontario, on cars held for orders to \$1 per day and extended the time to 48 hours before demurrage shall begin.

The National Manufacturers' Association has entered a formal protest against the new minimum carload weight of 30,000 on roads west of Chicago, which, as to them, means an advance in rates of about 17 per cent.

There is a good demand for vessel room at Duluth, where the elevators are full, containing at March 1 over 5,000,000 bushels of wheat in excess of last year. Over 1,000,000 bushels had been chartered at 2 to 2¼ cents by March.

Only one bid was made for the Chesapeake & Ohio Canal, that of the president of the Consolidation Coal Company, who offered \$300,000, filing with his bid a bond guaranteeing to keep the canal open as a waterway for 20 years.

A bill to fix maximum rates for the state of Washington was recently defeated in the Legislature on the ground that the reductions were too great. Another bill to compel the interchange of traffic between railways in the state is still under consideration.

The bottoms in Chicago fit to carry grain were about all chartered by February 15. But for the ice jam at the west end of Lake Erie more grain tonnage would have been on Lake Michigan. The Buffalo blockade had also much to do with keeping vessels away from Chicago.

The Illinois Central is spending a large sum on grade reductions on its New Orleans lines south of Cairo; and now that the franchise differences with the New Orleans city council have been settled, it is expected the road will make a still better bid for export grain business than ever.

The old grain rate east from Evansville on shipments originating at Ohio River points between Cloverport and Paducah, Ky., has been restored. It is the so-called "120-per-cent rate" in force some years ago, and applies only to grain and grain products shipped by river to Evansville and thence East.

The 14-foot enlargement of the St. Lawrence system of canals, expected to be completed for this season's use, has been delayed by the contractors on the Galoup Rapids, who have reported to the Canadian government the causes and asked for an extension of time to complete their work to the spring of 1900.

The complaints of Chicago shippers in relation to the corn rate of 16 cents to the seaboard, as against 13½ cents from the Mississippi River, having received no notice from the roads, the shippers, through the Chicago Board of Trade, have appealed to the Interstate Commerce Commission, which body met in Chicago on the 13th inst. to investigate the situation.

Southern California has been drawing on the states eastward for flour, corn and even barley; and at the present outlook this demand will continue through another crop year.

The Parry Sound Elevator of the O., A. & P. S. Ry. has been accumulating grain all winter and now contains several hundred thousand bushels. The location of this elevator has built up quite a little village for the workmen, who are to be provided by the owner, J. R. Booth, with a school and a church.



# BARLEY AND MALT

The brewery of the new Monarch Brewing Company of Baltimore will cost \$230,000.

The American Malting Company has declared its usual 1 3/4 per cent quarterly dividend payable April 15.

The addition to the malt house of the L. Rosenheimer Malt and Grain Company at Kewaskum, Wis., received its machinery during the past fortnight.

Harry C. Hoefinghoff of Cincinnati was on February 21 granted letters patent (No. 619,746) on a growing cylinder for system of pneumatic malting, assigned to Albert A. Frey of same place.

The Weller Manufacturing Co. has just completed an outfit of rope drives, friction clutches and grain handling machinery to go in the Montana Brewing Co.'s new malthouse at Great Falls, Mont.

Negotiations are in progress for the sale of the Scott malt house at Lyons, N. Y., to the American Malting Co. This house has a Galland-Henning system of about 300,000 bushels' capacity.

The old abattoir plant at La Crosse, Wis., has been sold to Robert Ellis, a grain and commission merchant of Milwaukee. It is unofficially announced that the building will be remodeled for a malt house.

A Wall Street reporter February 16 says: "Since the American Malt Company secured control of the Neddinger Company and thus obtained an absolute monopoly of the malting business in the East the stock has steadily declined, and during the last week or two has sold at almost the lowest price in a year."

Ferd. Becker, at one time known as the "Barley King" of Milwaukee, died at the home of his son in Kansas City in February last. He had been an invalid for two years past. He was born in Rheinfels, Germany, 70 years ago. He came to America when a young man and as early as 1850 traded with the Indians of Minnesota. In 1859 he settled at Minneapolis and became an operator in barley and other grains and made a fortune, which he afterward lost.

State Grain Inspector G. P. Wright of Washington predicts another failure of the barley crop in California owing to the drought; and he advises Washington farmers to increase their barley acreage. A ton of barley costs no more to raise than 1,200 pounds of wheat, but sells for \$21, whereas wheat is worth only \$17 (about). Eastern Washington raises the heaviest and best quality of barley produced on the coast. The grain is hard and flinty and full of sugar, and the absence of rain and dews in harvest time gives a good chance to save it. Oregon raises very little barley, the soil there being a light upland and not like the rich bottoms of the Palouse. Feed is also scarce in this state, and livestock and oats are high. Barley is used a great deal for feeding in California and this will increase the demand.

The Francis Perot's Sons Malting Company of Philadelphia and Oswego, N. Y., claims to be the only house in the United States in which the business has been carried on in the same line by direct descent from generation to generation for over 200 years. It was founded in 1687 by Anthony Morris. The malting business continued under the name of Morris until 1818. In 1786 Francis Perot was apprenticed to the Morris firm, and in 1818, with his brother, William S. Perot, he started a brewery and malt house. He married, in 1823, a daughter of his former employer and shortly after this the old Morris firm was merged into that of Francis Perot. Since 1850 the business has been confined to malting. The elder Perot retired in 1868 and the firm became known as Francis Perot's Sons. It received its present title a few years ago. T. Morris Perot, president, and Elliston Perot, secretary of the company, represent, respectively, the seventh and eighth generations in direct descent from the original founders, and are in control of the company.

Bristol is the largest importer of barley of the English ports, the great breweries of the west of England and of the Midlands buying there their foreign grain. The U. S. Consul, Mr. Lathrop, reporting recently on barley said: "The United Kingdom imports about 49,000,000 bushels annually, of which about one-fifth comes to Bristol; but the mass of this great importation is, of course, the ordinary cheap feeding barley. Asiatic Turkey, Rumania, and the United States supply the bulk of the higher grades, the larger part of the American contribution coming from the Pacific Coast by sea. The tendency of the California barley to chip in the envelope of the kernel is still complained of by maltsters. The northwestern states are sending some excellent brewing barley; but in a certain proportion of the parcels may be found a preventable fault—a fault that in some cases has been known to reduce values

as much as 8 to 10 cents per bushel. That the seed may have a neat and uniform appearance, the thrashing machine is set somewhat too close, with the result that the skin of the kernel is cut at each end, thus permitting access of air and moisture to the interior, with the result of germination en route or uncertain and irregular action on the malting floor."

## IMPORTS AND EXPORTS BARLEY AND MALT.

IMPORTS.		Bushels.	Value.
Barley, 12 months ending Dec., 1897..	1897..	820,637	\$248,207
do. 1898..	1898..	105,289	49,342
Barley malt, 12 mo. ending Dec., 1897..	1897..	7,128	6,519
do. 1898..	1898..	4,663	4,250
EXPORTS.			
Barley, 12 months ending Dec., 1897..	1897..	15,926,885	\$6,835,174
do. 1898..	1898..	4,540,955	2,318,929
Barley malt, 6 mo. ending Dec., 1897..	1897..	166,035	110,590
do. 12 mo. ending Dec., 1898..	1898..	451,446	329,148

## ELECTRIC MALTING.

A description is given in our contemporary Gambrinus of an improved malting apparatus, in which the stimulative influence of electricity is supplemented by aeration with air charged with moisture by spraying.

A double floor is formed, the lower portion of which is composed of channeled bricks, which, when surmounted with the cover of perforated iron plates, forms a system of air passages supplying ventilation to the entire floor space. This iron floor acts as the positive electrode, the negative electrode consisting of a wire netting laid over the heaps of germinating barley. Air, attuned according to requirements by contact with a vessel containing ice, is forced by a high pressure fan, etc., into the main air channel, whence it passes into the branches—being charged with moisture en route by a spraying apparatus—and escapes through the barley, which it frees from carbonic acid and keeps from drying too rapidly.

The advantages claimed for this system are: Accelerated germination, better modification of the contents of the grain, increased yield of malt, and prevention of mold.

A constant temperature is maintained in the barley heap by the moisture cooling the brick floor. The upper floor can be easily taken to pieces for cleaning out the air channels, etc., and there is no danger to be feared from the weak electrical current used, even though the precaution of turning off the current before entering the floor be omitted.

Preliminary experiments on a small scale having proved satisfactory—the barley germinating in twenty-four hours, and yielding a well-modified malt ready for the kiln in four and three-quarters days—the apparatus was tried in a large brewery for several months, with the result that 163 pounds of good malt were obtained per 200-pound sack of barley, the sugar content being 74 per cent. The resulting (top fermentation) beer was pronounced excellent by connoisseurs, and regarded as superior to that obtainable from ordinary malt.

If these advantages are confirmed by practical experience this invention will mark a considerable advance in the malting industry.—Anzeiger fuer Brauereien.

## CORN IN VIRGINIA.

The yield of corn throughout Virginia, in fact, wherever "corn-dodgers" are an indispensable adjunct of almost every meal, is estimated by barrels instead of bushels, says W. M. K. in Farm and Fireside. The original standard barrel is made large enough to hold as much as three ordinary flour-barrels. It is usually an iron-hooped one, having handles a little above the middle, so that two men can carry and empty it easily. The contents of such a barrel of ordinary corn will yield, when shelled, about five bushels. A variety of corn having a very small cob and deep, long grains yields more nearly six bushels, so the seller is the loser and the buyer the gainer.

The time-honored method of blading and topping corn is rapidly being superseded in Virginia by the northern one of cutting and shocking the crop, it having become evident that the old method requires so much time and labor that it is by no means the more profitable one.

In the North the outside covering of the corn is called the husk; but in the South the cob is called the husk, and the outside covering of each ear is called the shuck. In the South the leaves below the ear are called blade fodder, and the stalk above the ear is called the top fodder. After being bladed and topped, and the corn well ripened, it is snapped off and stored with the shuck on, the reason being that the corn-weevil does not work on the corn in the shuck so much, and when it is left in the shuck the rats eat but one ear at a time, and therefore do not shell off much more than they eat. More than this, it is claimed that where the shuck is left on, the meal made from it has the fine flavor of that first made from the new crop.

"Why not export corn in the shuck?" asks W. M. K., who adds: "If this would prevent the bitter or musty taste which bulk meal and even shelled corn

takes on during its shipment abroad it would be of great advantage in promoting its more extended use." But would the foreigner pay freight on the husk and shuck for the sake of the supposed improvement in flavor of a food that goes into the stomach of his animals and not his own?

## NEW YORK AS A HAY MARKET.

The familiar prediction, that the multiplication of the bicycle, the coming of the automobile and the horseless truck, and above all, the substitution of electrical power for horses, would ruin the hay trade, has, so far as New York is concerned, at least, been a false prophecy, for, as a writer in the Country Gentleman has said, "the closing half of the year 1898 showed the best six months' trade in hay that has been recorded in many years," the daily consumption during that period having reached 1,200 tons, as against a previous average of only 1,000.

This marked increase is explained in various ways. First, there were the government purchases, New York being one of the chief hay distributing points of the Atlantic seaboard. Then the hay demands of Porto Rico and Cuba, after the capitulation, were not without their effects, and sanguine dealers even believe that that demand will permanently augment New York's business in hay, and revive the hay-growing industry of that state. But a more definite influence on the hay trade of the city has undoubtedly been the revival of business. The trucking business has been very brisk, and the consumption of hay by trucking horses which are daily in harness is much larger than when they are idle; for the truckmen, when business is slack, make hay their first point of economy. The improved live-stock export trade has also benefited hay to some extent.

New York's hay comes in part from that state, but a greater part comes from Michigan, Indiana and the West generally. This western trade, one authority says, has at times so overburdened the market that prices have declined below the profit point. Much of this hay from the Far West is excellent, but along with it comes a great quantity of inferior hay. At times the grades below prime and firsts are so plentiful that it is hard to move them, while there is an insufficient supply of the top grades. This disparity between the best and low grades of hay is a general feature of the market that prevails most of the time. The cream of the trade is for very fancy, bright, well-cured hay, to supply the demand for private and high-class livery stables. Hay that will pass inspection for this trade must be above reproach. It always commands from 5 to 10 cents per 100 pounds more than all other grades.

The new trade conditions are expected to revive hay growing in New York state, where the idea had become current that only the West could furnish the fancy hay demanded by the city trade. But we are told that during the last few years the farmers in New York state have been sending in the old-time fancy hay that at one time made their districts famous. With a revival of the industry there has been a great improvement in the quality, demonstrating conclusively that very fancy hay can be raised in New York, even if the land has been cultivated for a century or more.

In this connection, some points contributed recently to the Hay Trade Journal by Daniel McCaffrey's Sons, the leading hay firm of Pittsburg, relative to the hay trade in that city, may be interesting. This firm, father and sons, has been in the hay trade there for more than thirty years. The writer points out that within a radius of 40 miles from the Pittsburg City Hall there are 1,609,000 people, whose animals last year consumed 435,717 tons of hay, a much larger quantity in proportion to population than were consumed in New York. But the tonnage of freight handled in Pittsburg is enormously out of proportion to that of other American cities, having been, in 1898, 36,679,415 tons by rail and 7,318,366 by river, a total of 43,997,781. The trucking of the city and country is therefore an enormous interest. The writer predicts for 1899 an even "greater increase in the consumption of hay in Pittsburg and vicinity than that of 1898, owing in a measure to the growing prosperity of the city, as well as the expenditure of more than \$5,000,000 on city boulevards and beautiful drives. The decadence of the bicycle and a return to the good old roadsters is but another evidence of the hoped-for increase during 1899."

The demands of Pittsburg must be supplied from the West, for the reason that since the discovery of natural gas and oil throughout the city's surroundings, there has been a gradual, but a steady, abandonment of the production locally of hay for the market.

Hear the chimes  
Of brighter times—  
Jingling dollars—tingling dimes.  
Sweeter roses—sweeter rhymes—  
Hear the chimes  
Of brighter times!  
—Frank L. Stanton, in Atlanta Constitution.



## Court Decisions

[Prepared especially for the "American Elevator and Grain Trade" by J. L. Rosenberger, LL. B., of the Chicago Bar.]

### Solvency of Mortgagor of Grain Not a Factor.

Among the provisions in a chattel mortgage on certain wheat was one that, if the mortgagor sold the wheat without the consent of the mortgagee, the latter should have a right to take immediate and unconditional possession of the same and sell it at public or private sale. In an action brought by the mortgagee against a purchaser of the wheat for unlawful conversion thereof, the Appellate Court of Indiana holds, first of all (see *Conwell vs. Jeger*, 51 *Northeastern Reporter*, 733), that the burden was upon the mortgagee to show that the purchase by the defendant was without his consent. Then, it holds that an allegation by the mortgagee of a right of possession was satisfied by evidence that a condition of the mortgage was broken giving this right. And as the right to take possession of the property became absolute upon breach of the condition, the court further holds that it was not necessary to show that, at the time, the mortgagor was insolvent; in other words, the court says that the contract expressed in the mortgage provided in what manner the possession of the property should pass to the mortgagee, and upon breach of the condition this right became absolute, without reference to the solvency or insolvency of the mortgagor. The purchaser of the wheat from the mortgagor could in no sense be said to occupy the position of a surety.

### Caught by a Forged Warehouse Receipt.

The owners of a warehouse for the storage of grain, on the 6th of the month, discharged their agent, who had been in charge of the warehouse. On the 14th, a man came to this former agent with a warehouse receipt, which the latter had theretofore made out to still a different party, represented that it was incorrect, and got a blank receipt signed by this former agent on the representation that it would thereafter be properly filled out, etc., correcting the alleged mistake. This blank receipt, so signed, afterward turned up as a receipt, dated the 13th, for 640 sacks of wheat on storage by the man who got the signature, which he sold to an agent of a grain buyer for \$765.05. Then, of course, what had been done came out, on the refusal of the warehousemen to deliver the wheat on the receipt; and the grain buyer sued them to recover the sum he had paid on the receipt. He tried to make it appear that the loss was due to the negligence of the warehousemen in not giving him notice of their agent's discharge and the revocation of his authority. But the Supreme Court of California affirms a judgment against the grain buyer and in favor of the warehousemen without discussing their duty to give notice, or whether they were negligent in that respect, principally because it maintains that, while the evidence on the point was conflicting, the trial judge's finding that the agent of the grain buyer had notice of the discharge seven days before the date of the receipt should not be disturbed, and that if he had such notice the grain buyer was the one to stand the loss, and not the warehousemen. (*McNear vs. Bourn*, 55 *Pacific Reporter*, 596.)

### When and Why Title Does Not Pass by Contracts for Sale of Standing or Stacked Grain.

There are two general rules of fundamental importance bearing on the question of the passing of title by contracts of sale.

First. Where, by the agreement, the seller is to do anything to that which is sold for the purpose of putting same into that state in which the purchaser is to be bound to accept it, or, as it is sometimes worded, into a deliverable state, the performance of these things will, in the absence of circumstances indicating a contrary intention, be taken to be a condition precedent to the vesting of the title to the property in the purchaser.

Second. Where anything remains to be done to that which is sold, for the purpose of ascertaining the price, as by weighing, measuring, or testing that which is sold, where the price is to depend upon the quantity or quality, the performance of these things also will be a condition precedent to the transfer of the title to the property, although the individual property be ascertained, and it is in a state in which it ought to be accepted.

In harmony with the foregoing, the Court of Appeals of Kansas holds, in *Larkin vs. Johnson*, 54 *Pacific Reporter*, 690, that a verbal contract for the sale of unthreshed standing corn and rye in the stack, which provides that the seller shall, before he receives pay therefor, husk, weigh, and deliver the corn at the market price, and thresh, weigh, measure, and deliver the rye at some future time at 45 cents per bushel, does not vest the title to such property in the purchaser.

The court says that this contract amounted to merely an executory, or unperformed, agreement, and that the corn and rye would remain the prop-

erty of the seller until the contract was executed or performed. But in determining whether the title had or had not passed by the contract, it said, in accordance with the rules above laid down, that, of course, the primary consideration was one of intention. The corn was to be husked, weighed, delivered and the market price ascertained; the rye to be threshed, weighed, or measured and delivered. This, according to the terms of the contract, was all to be done by the seller before he was entitled to his pay or credit on his indebtedness for the value of the corn and rye. That was all there was to the case, so far as the evidence disclosed. Consequently, the court holds that the seller was not divested of the title and ownership of the property by the agreement made, and reverses a judgment to the contrary.

In another Kansas case which is cited here, it was held that a contract for the sale of standing millet, which provided that it should be cut and stacked on the farm of the seller, and within thirty days be measured and paid for, did not vest the title of the millet in the purchaser until it had been measured and paid for according to the contract.

It follows, for one thing, that after such contracts are made, and until they are performed and title passed, the corn, rye, or other grain involved can be attached by creditors of the seller, in spite of the interests of the contract purchaser.

### Mortgagee Cannot Maintain Replevin Against Holder of General Storage Tickets.

A farmer who had mortgaged his crop took the wheat he raised to an elevator and received therefor general storage tickets, which he turned over to one of his creditors in payment of a claim. The mortgagee then brought an action of replevin against the party to whom these tickets were thus turned over.

Assuming for the purposes of the disposition of this case that the mortgagee was entitled to the possession of the wheat at the time he commenced this action, the Supreme Court of North Dakota holds (*Best vs. Muir*, 77 *Northwestern Reporter*, 95) that under the undisputed facts he proceeded against the wrong party, because replevin will not lie against one who has neither actual nor constructive possession of the property sought to be recovered.

It is true that in order to maintain replevin the property need not be physically within the possession of the party sued. It is sufficient if it is within his legal control, although it be actually held by another; as, for instance, when an agent holds property for his principal. But in this case the Supreme Court says the party to whom the general storage tickets were turned over neither held the wheat itself nor controlled the possession thereof. This is explained by the character of the tickets.

The wheat, the court goes on to say, was delivered by the mortgagor to an elevator and ordinary storage tickets were issued, obligating the warehouseman to deliver to the holder thereof, not the identical wheat, or even wheat from the same mass with which it was commingled, but only an equal amount of grain of the same grade to be delivered out of any wheat which the warehouseman might have on hand at the time the holder of the tickets should demand performance of the contract.

Here the court takes judicial notice of the ordinary course of business in storing grain and delivering the same upon storage tickets issued therefor, and it states that unless it is stipulated in the contract that the identical grain should be redelivered, or that grain from the particular mass with which it was mingled should be redelivered, the warehouseman is at liberty to procure from any source the grain with which to make good his contract.

What control, then, did the holder of the tickets in question ever have over the mortgaged wheat which was delivered to the elevator? All he could claim was that he be given, from such source as might suit the convenience of the elevator, the number of bushels of wheat named in the tickets of the grade therein specified. To say that one so situated with respect to mortgaged property has any control thereover, the court insists, is to confound all legal distinctions. And so it holds that the mortgagee could not maintain replevin against the holder of the storage tickets for the wheat mortgaged, he being neither in the actual nor in the constructive possession thereof.

If, however, this mortgaged wheat had been placed in a particular bin with other wheat, and the tickets issued entitled the holder to take the wheat represented thereby from that particular mass, the court admits it might well be said that he had control over the grain mortgaged.

The court furthermore says that the mortgagor, when he directed that certain of the wheat tickets should be issued and delivered to a creditor in discharge of his obligations to him, turned over to him the proceeds of mortgaged property, and it suggests that it might be that in a proper suit in equity the mortgagee could follow into that creditor's hands such proceeds and subject them to the lien of his mortgage. But this was not such a suit.

The court also suggests that the elevator company having had possession of the mortgaged wheat, the mortgagee could have maintained re-

plevin against it had he been able to show that at the time of the commencement of the action against it it still had possession of the identical grain, although mingled with other wheat in its warehouse. And if the elevator company had so dealt with the wheat that replevin would not lie, then, the court says, it was liable for the conversion thereof; provided, of course, that the mortgagee was entitled to the possession of the wheat.

A rehearing was granted the mortgagee's counsel and the case was a second time fully argued before the Supreme Court, which resulted only in a re-affirmation of its position by the court, November 21, 1898, the court declaring that it clearly appeared that the defendant, as a storage ticket holder, did not have even any constructive possession of the grain in question, or of any specific grain, and that under such circumstances it was entirely clear that an action would not lie against the ticket holder for the value of the grain covered by the mortgage.

## Late Patents

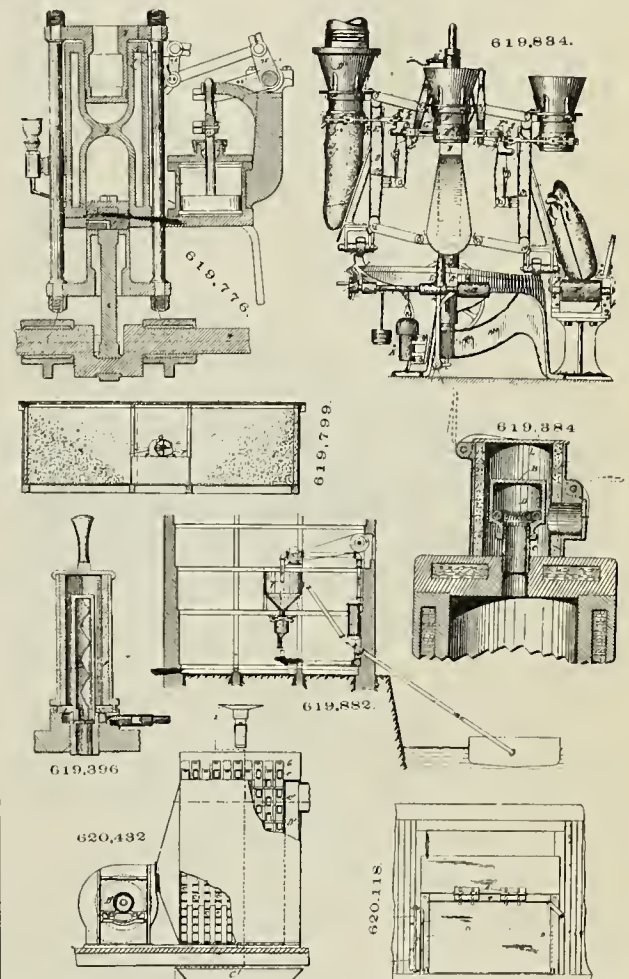
Issued on Feb. 14, 1899.

Igniter for Gas Engines.—Walker L. Crouch, New Brighton, Pa., assignor to the Pierce-Crouch Engine Co., same place. Filed Feb. 2, 1897. No. 619,396. See cut.

Incandescent Igniter for Explosive Engines.—Charles R. Bolling, Chicago, Ill., assignor of one half to Clark Sintz, Grand Rapids, Mich. Filed Dec. 7, 1897. No. 619,384. See cut.

Issued on Feb. 21, 1899.

Apparatus for Filling Bags.—Wm. E. Nickerson, Cambridge, Mass. Filed Feb. 7, 1898. No. 619,834. See cut.



Gas Engine.—Peter Murray, Newark, N. J., assignor, by mesne assignments, to the Standard Gas Engine Co. of New Jersey. Filed May 1, 1896. No. 619,776. See cut.

Gas Engine.—Alex. A. Vansickle, Indianapolis, Ind., assignor by direct and mesne assignments to Thos. F. Scullin and Henry C. Jordan, same place. Filed Nov. 13, 1897. No. 620,080.

Apparatus for Elevating Grain, Etc.—Rudolf Fölsche, Halle-on-the-Saale, Germany. Filed April 12, 1898. No. 619,882. See cut.

Grain Trimming Device.—T. J. Skillin, Chicago, Ill. Filed Nov. 14, 1898. No. 619,799. See cut.

Issued on Feb. 28, 1899.

Grain Door for Cars.—Lincoln Gookins, Watson, Mo. Filed Oct. 3, 1898. No. 620,118. See cut.

Grain Drier.—Wynn E. Ellis, Milwaukee, Wis., assignor to the Paine-Ellis Grain Drier Co., same place. Filed Nov. 5, 1897. No. 620,432. See cut.

Grain Loader.—Marcus L. Page, Kyte River, Ill. Filed Nov. 22, 1898. No. 620,492.

Issued on March 7, 1899.

Explosive Engine.—Hiram P. Maxim, Hartford, Conn., assignor to the Pope Mfg. Co., same place and Portland, Me. Filed March 2, 1896. No. 620,602.



### SUPERSTITIOUS.

Talk about sailors being superstitious, the following from Graphite, issued in the interests of Dixon's graphite productions, and copyrighted by the Joseph Dixon Crucible Co., Jersey City, N. J., is simply a commercial daisy:

"Talking of hoodoos and mascots," said a member of the Stock Exchange, "the boys on the floor of the Exchange are as suspicious as a lot of sailors. It you don't believe it you look at the lead pencils they are using the next time you are in the building."

"You won't find a man using a long lead pencil. Why? Because a long pencil is a hoodoo of the worst kind. They always cut a new pencil in half before they sharpen it. Some of these pencils acquire the reputation of being lucky."

"Less than a week ago I came down without my pencil, which, by the way, is a lucky one—every memorandum made with that pencil results in a profit for me—and I borrowed one from a friend on the floor. He handed me a stump about an inch long and said: 'You can use that; it's a lucky pencil.'"

"Sure enough, I made two deals in the morning, and each netted me a handsome profit."

"I was about to make a memorandum of some stock I had bought, when my friend approached me and said:

"Here, take this pencil and let me have mine again. I've lost on every deal since I loaned it to you."

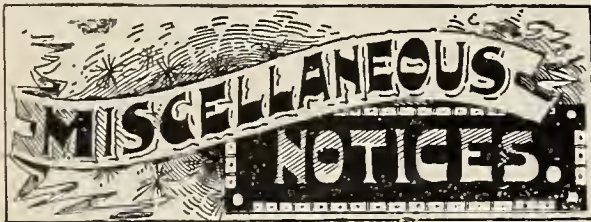
"Sure enough, I lost on that deal and the luck went back to the owner of the pencil."

"When you get hold of a lucky pencil you want to hang to it."

"Some of the boys have little lucky pencils not more than an inch long, and they guard them as they would their lives."

"If you, through carelessness or accident, cause them to break the lead point they lose whatever regard they have for you and forever afterward regard you as inimical. Some of them wouldn't take \$5 for a little piece of pencil worth considerably less than a cent."—New York Press.

Small grain has so far increased in some parts of Texas at the expense of cotton that not infrequently the public cotton gins have had to seek new locations in order to find patronage.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

#### WANTED.

I want to buy an elevator or lumber business.  
F. W. MOBERLEY, Windsor, Ill.

#### REPRESENTATIVES WANTED.

Millwrights, machinery dealers and manufacturers' agents wanted to represent us in their territory, on commission, for the sale of elevating, conveying and power transmitting machinery, mill and elevator supplies. Address

WELLER MFG. CO., 118 and 120 North Ave., Chicago, Ill.

#### PARTNER WANTED.

A grain dealer of liberal mind, in possession of his business establishment and \$8,000 besides, wants a partner with about equal capital, \$6,000 or more. Posey County is the finest grain section of the state of Indiana. Address

HENRY SCHNACK, Box 33, Mt. Vernon, Ind.

#### SITUATION WANTED.

Wanted, situation as superintendent or foreman. Fifteen years' practical experience in operating elevators. Am up in every detail. Thoroughly experienced in grain. Good executive and administrative ability. Am accustomed to distributing labor to best advantage and to taking charge of office work. Last building had capacity of 1,250,000 bushels. Excellent references. Age 35; married; Scotch.

D. W. MITCHELL, 6658 Wentworth Ave., Chicago, Ill.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

#### ELEVATOR FOR SALE.

For sale, elevator and residence. Address  
DRAWER D, Kirkman, Iowa.

#### ELEVATOR FOR SALE.

For sale, elevator located on the C., C. & St. L. Railroad. Good reason for selling.

J. I. C., Box 3, care "American Elevator and Grain Trade," Chicago, Ill.

#### ELEVATOR AND COAL BUSINESS.

For sale, elevator and cribs, with capacity of 140,000 bushels. In wheat years 250,000 bushels come to this town. Can ship on Wabash Railway or Illinois River, or transfer from one to the other. Six lots, office and new 8-room house and lot. Price \$11,000.

BOX 25, Meredosia, Morgan Co., Ill.

#### MICHIGAN ELEVATORS FOR SALE.

I offer for sale two elevators, both in first-class condition, located in the best grain and bean section of Michigan and doing a large business. One has a capacity of 15,000 bushels, built in 1894; the other 8,000 bushels, built in 1896. Good coal and feed trade in connection. I wish to reduce my business on account of poor health.

C. E. BURNS, Howell, Mich.

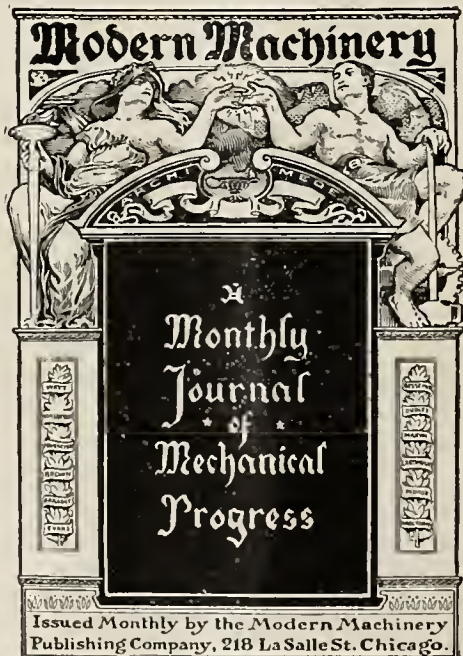
### Gasoline Engines

#### FOR SALE.

We have for sale two 20-horse power Gasoline Engines. One is a Lewis engine made by Webster Mfg. Co., Chicago, and the other by Fairbanks, Morse & Co. The Lewis engine has been in use about 3 years and the Fairbanks 1½ years. The engines are in perfect order and running in our elevator here every day. Our reason for selling is that we need more power and contemplate putting in a steam plant in preference to a third gasoline engine.

Early & Daniel, Cincinnati, O.

HIRAM MAXIM says: "Allow me to congratulate you on the excellent character of your publication."  
A. J. WALLIS-TAYLER says: "Few engineering journals contain such well assorted and generally interesting and instructive contents."



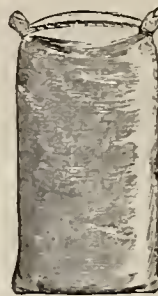
Fifty pages of reading matter in each issue. Subscription, \$1.00 per year; to foreign countries in postal union, \$1.50 per year.

Price: PER YEAR, \$1.00.  
PER COPY, 10c.

AGENTS  
WANTED

MODERN MACHINERY PUB. CO.

218 LA SALLE ST.,  
CHICAGO, U. S. A.



### GRAIN BAGS—BURLAPS.

All kinds of Bags,  
New and Second Hand.

ORDERS FILLED PROMPTLY.

W. J. JOHNSTON,

Factory and Office,  
182 Jackson Street, CHICAGO

### ROOFING AND SIDING.

The Garry Iron and Steel Roofing Co.,

168 MERWIN STREET, CLEVELAND, O.,

MANUFACTURES



Steel Roofing,  
Corrugated Iron,  
Siding and Metal  
Ceiling.

SEND  
FOR CATALOGUE

Write us for Catalogue and  
Low Prices on best

STEEL ROOFING, CORRUGATED IRON, ETC.

We are large manufacturers of these goods and can save you money.

SYKES STEEL ROOFING CO.,  
611 So. Morgan St., Chicago, Ill.,  
and Niles, Ohio

### Hawaii and the Philippines.

Send four cents (in stamps) for an illustrated booklet issued by the Chicago, Milwaukee & St. Paul Railway, the direct route across the American Continent to the new Trans-Pacific possessions of the United States. Full of latest reliable information and valuable for reference. Can be used as a textbook in school. Address Geo. H. Heafford, Gen'l Pass. and Ticket Agent, Chicago, Ill.

### Homeseekers' Excursions.

On the first and third Tuesdays in February and March, 1899, the Chicago, Milwaukee & St. Paul Railway will sell round-trip excursion tickets (good 21 days) from Chicago, Milwaukee and other points on its line, to a great many points in South and North Dakota, Minnesota, Iowa, Wisconsin and other western and southwestern states, at greatly reduced rates. Take a trip west and see the wonderful crop results of last year, and what an amount of good land can be purchased for a little money. Further information as to rates, routes, prices of farm lands, etc., may be obtained on application to any coupon ticket agent, or by addressing Geo. H. Heafford, Gen'l Pass. Agent, Old Colony Bldg., Chicago.

### E. R. Ulrich & Sons, SHIPPERS OF WESTERN GRAIN,

Especially High Grade White and Yellow Corn.

Elevators through Central Illinois on Wabash Ry., Chicago & Alton Ry., C. P. & St. L. Ry., and St. L., C. & St. P. Ry.

Main Office, 6th Floor, Illinois National Bank Building,

SPRINGFIELD, ILLINOIS.

Write for prices delivered. We do not care to make prices south of the Ohio River, on account of the freights.

C. H. Matthiessen, President.

Chas. L. Glass, Treas. and Sec'y.

S. T. Butler, Vice-President.

### The Glucose Sugar Refining Company,

FACTORIES:

GENERAL OFFICES:

Chicago  
Peoria  
Rockford

Ill. Marshalltown  
Davenport

Ia. The Rookery,  
CHICAGO, ILL.

The world's largest consumers of Corn. Daily consumption, 100,000 bushels. We are always in the market for corn, and confine our bids to regular grain dealers. Write or wire us when you wish to sell.

JOS. P. GRIFFIN, Mgr. Grain Dept.



**COMMISSION CARDS.**

[We will not knowingly publish the advertisement of a bucketshop keeper or irresponsible dealer.]

ESTABLISHED 1865.

**L. EVERINGHAM & Co.,****Commission Merchants.**

ORDERS AND CONSIGNMENTS SOLICITED.

**GRAIN AND SEEDS OF ALL KINDS**

For Cash and Future Delivery.

Suite 80 Board of Trade, - - CHICAGO, ILL.

ESTABLISHED 1867.

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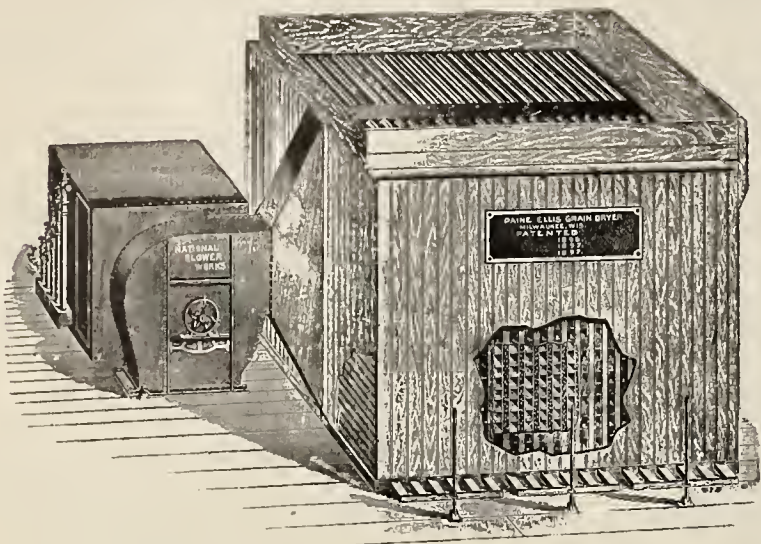


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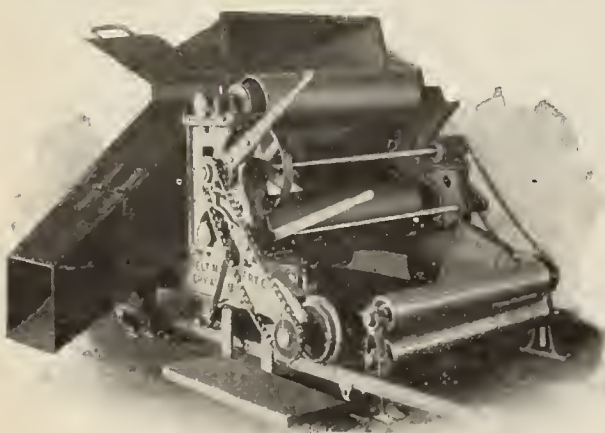
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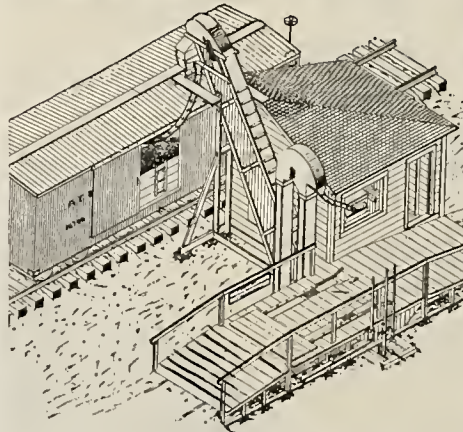
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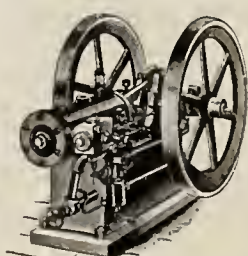


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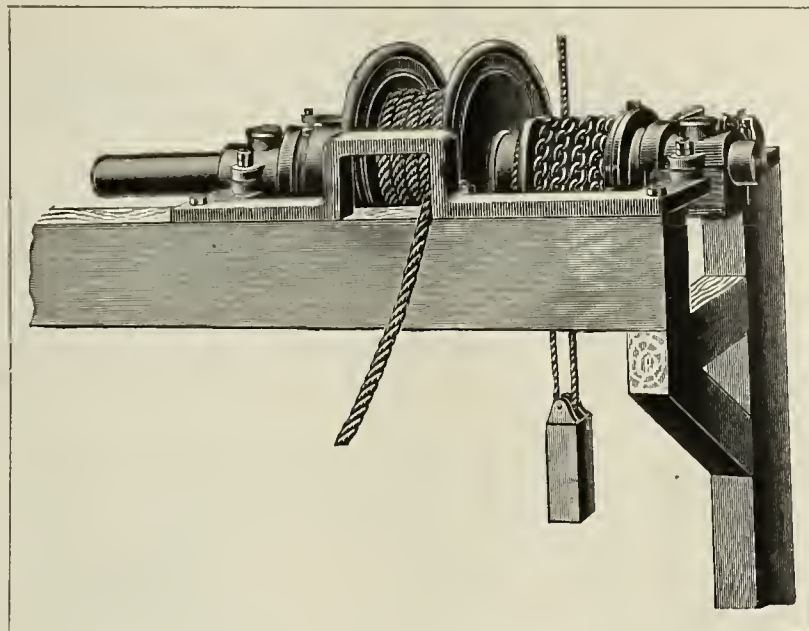
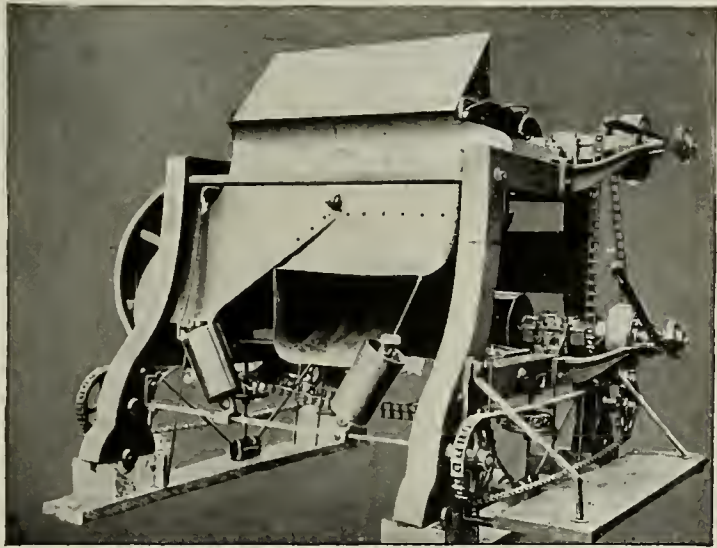
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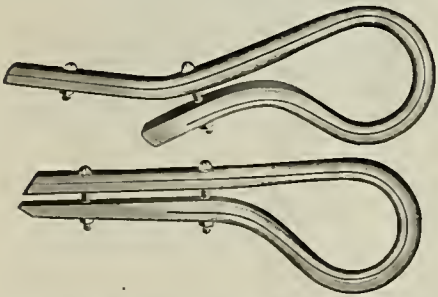
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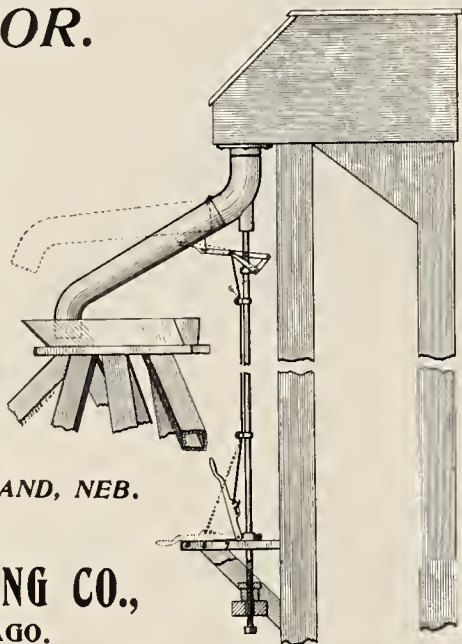
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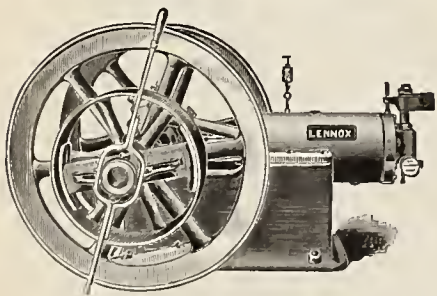
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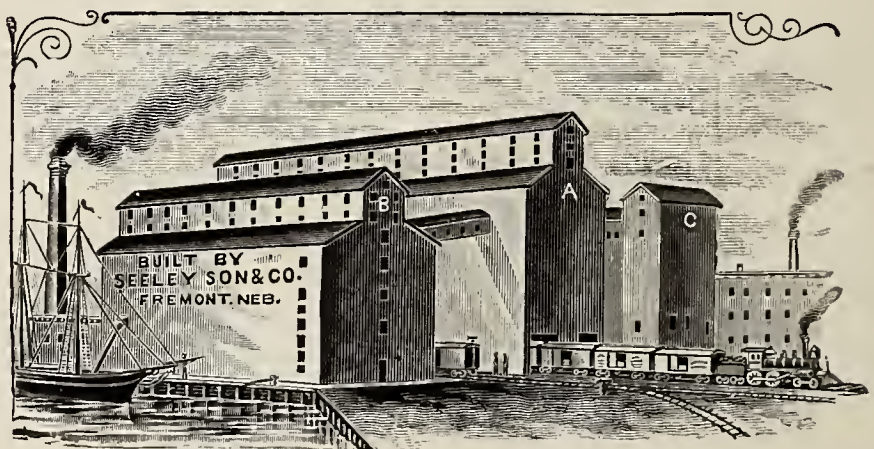
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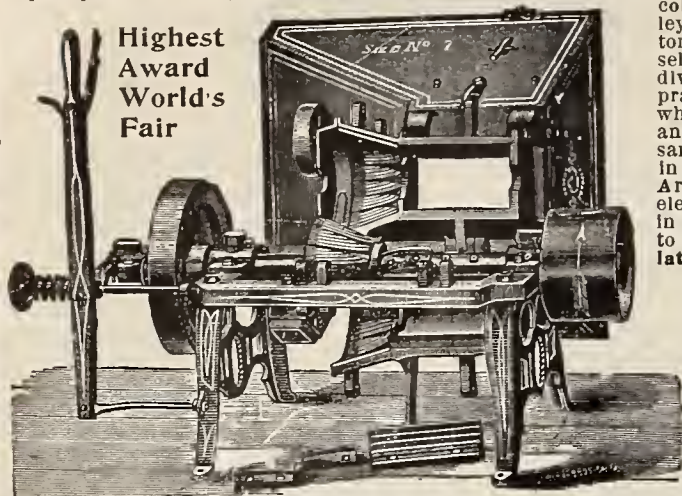




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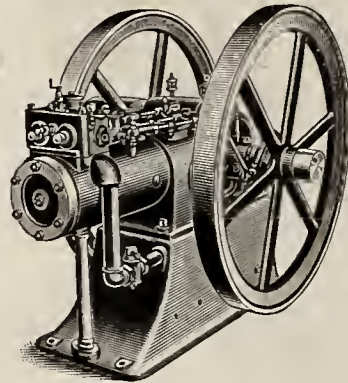


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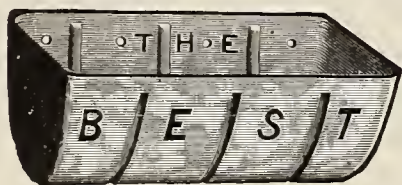
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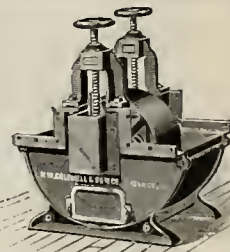
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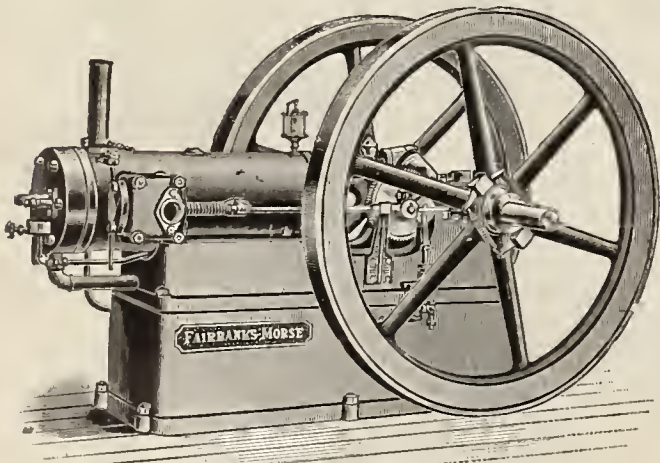
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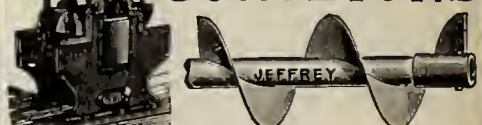
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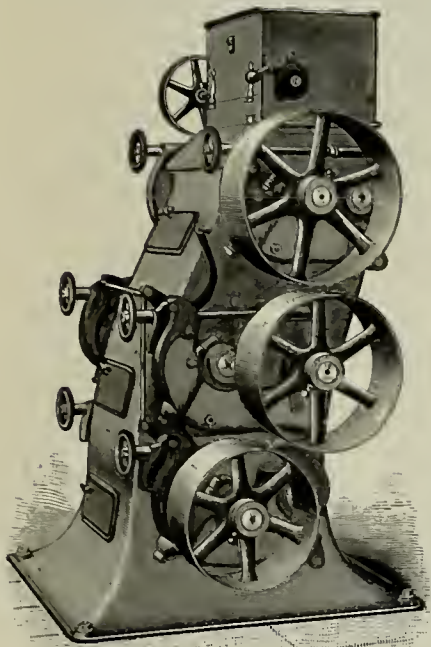


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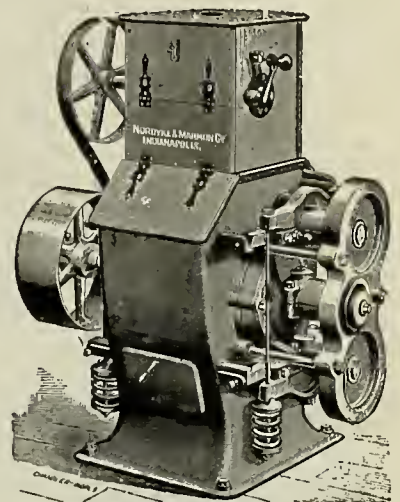


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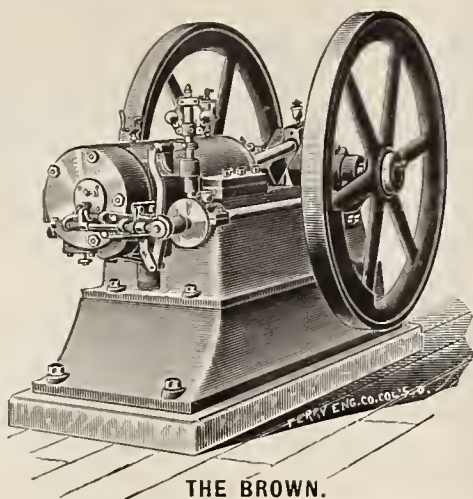


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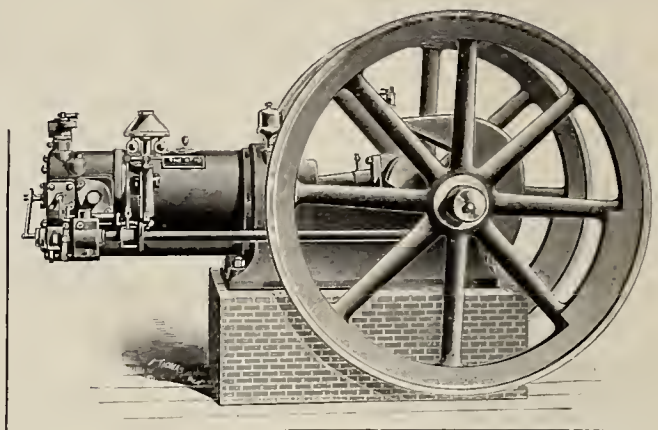
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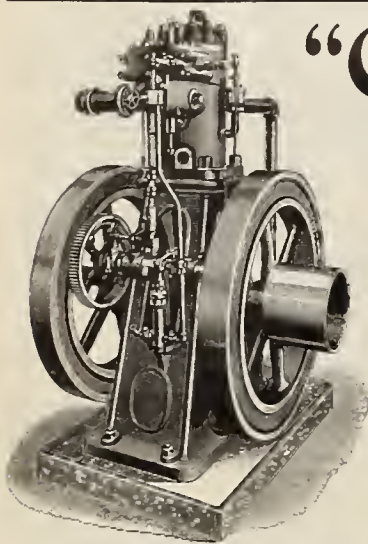
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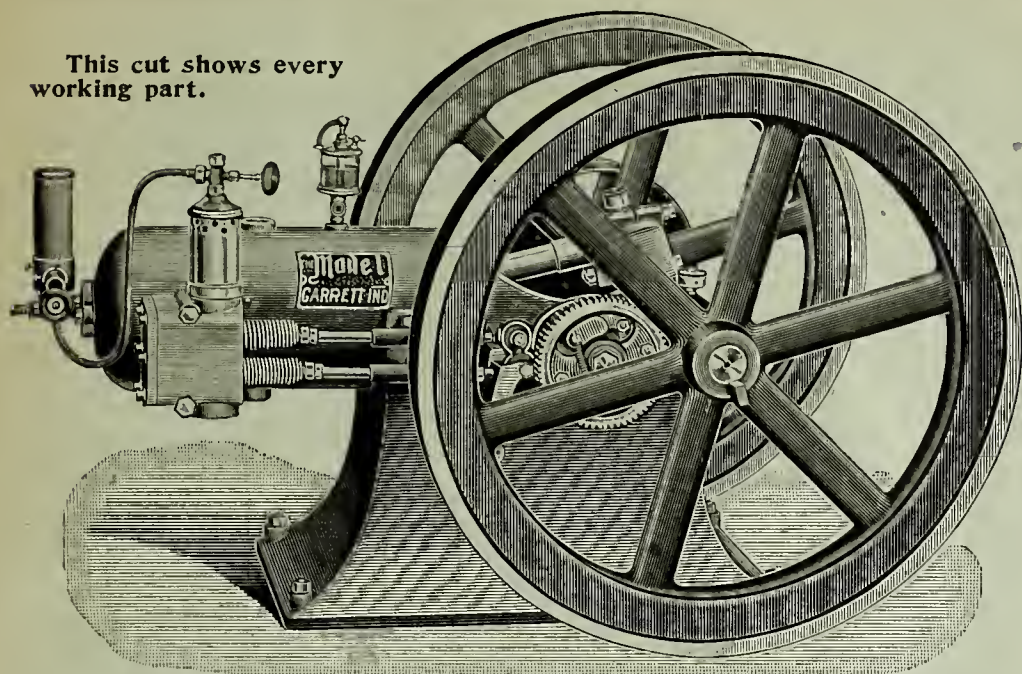
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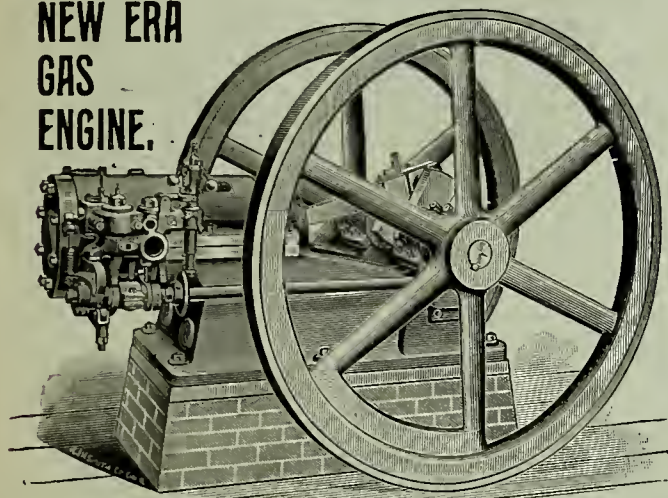
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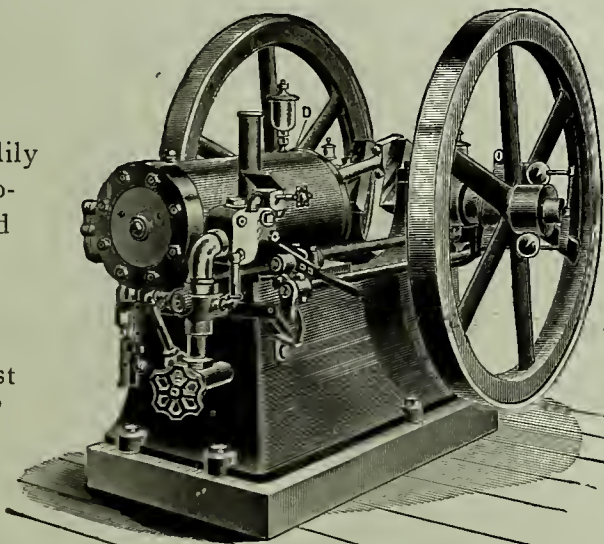
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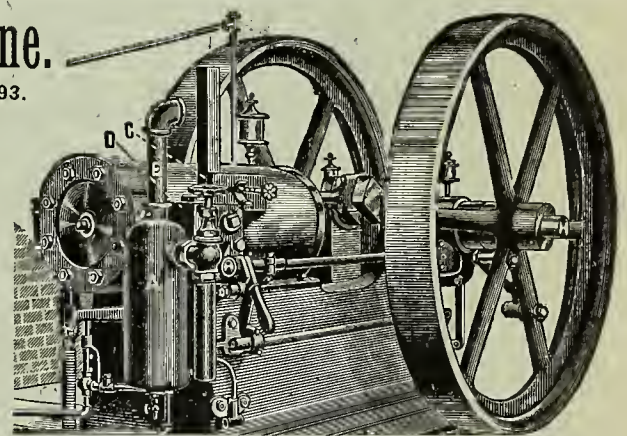
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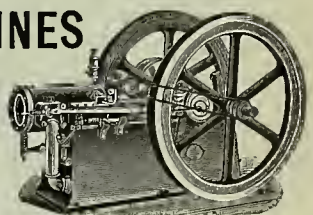
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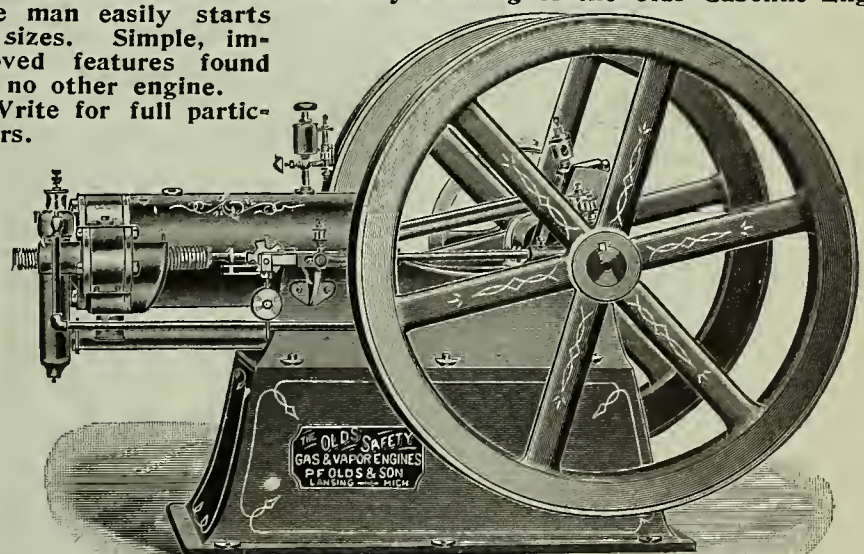


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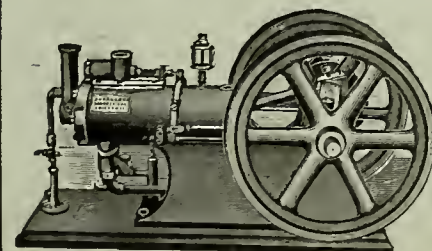


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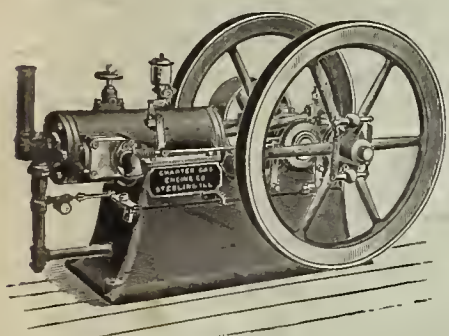
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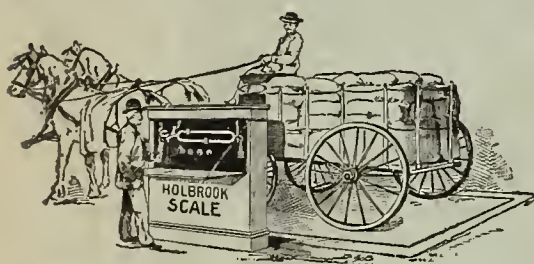
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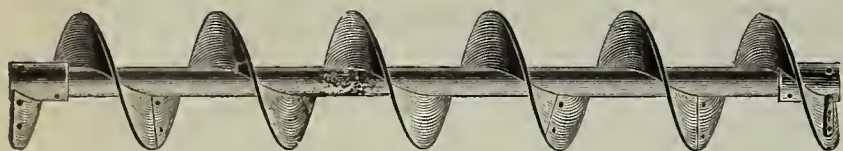


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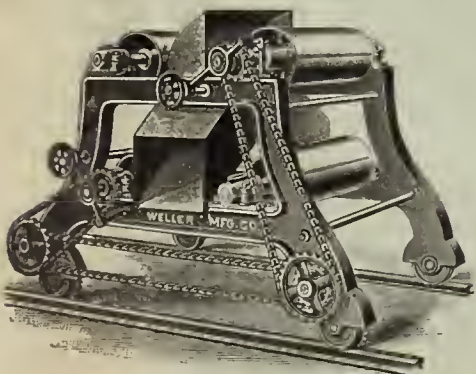
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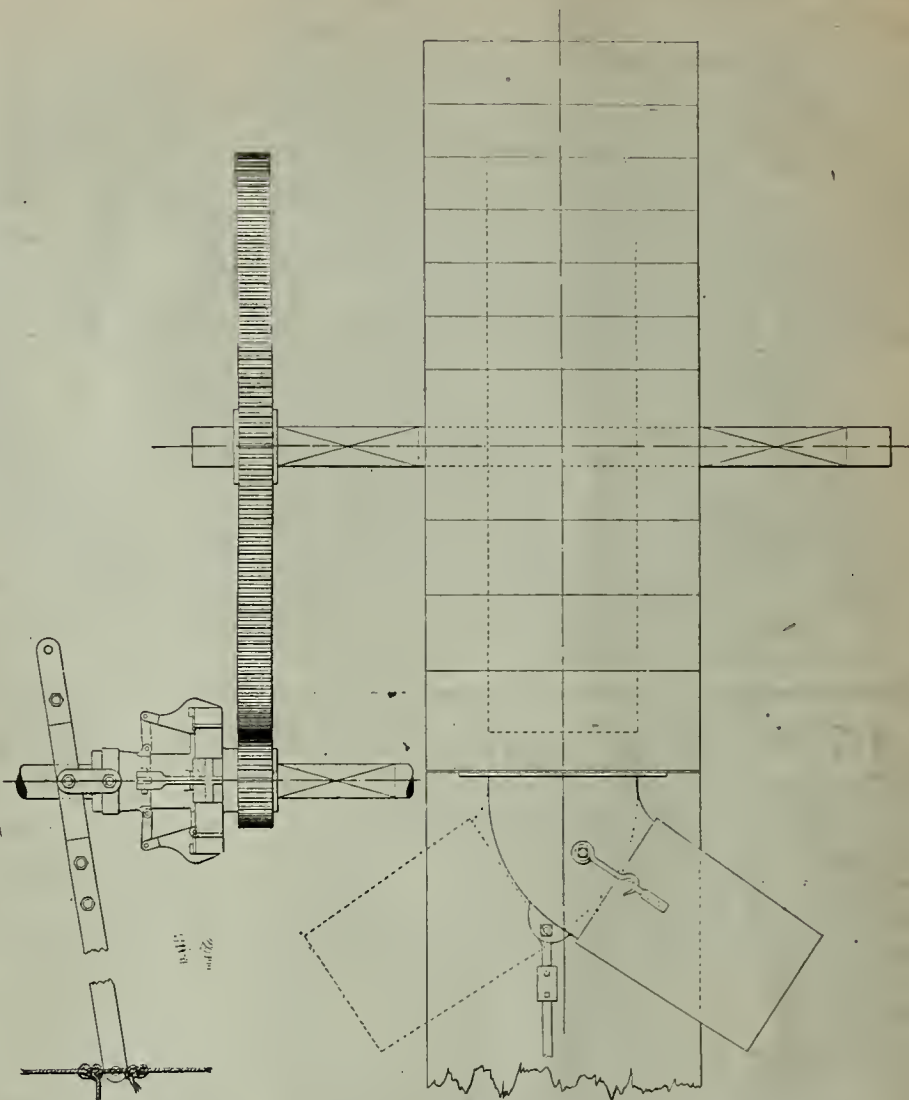
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